



ShaleProfile
Analytics

THE MAJOR TIGHT OIL BASINS

The Permian, Eagle Ford, Williston and the DJ-Niobrara

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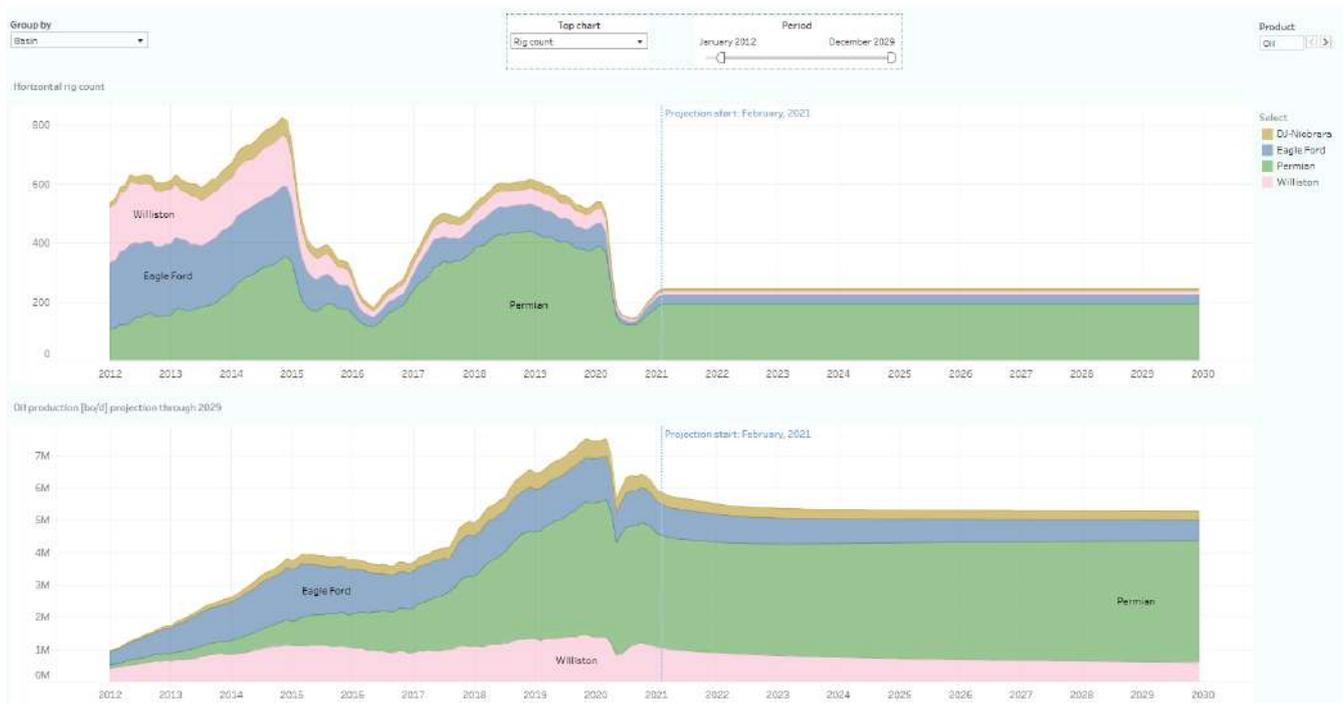
In this monthly report, we will analyze the latest developments in the 4 major US tight oil basins, which includes the Permian, Williston, Eagle Ford, and the DJ-Niobrara.

The report answers the following questions:

- 1- Drilling activity & outlook
- 2- The top oil producers
- 3- Well performance comparison (by basin)
- 4- Well status
- 5- Permit activity

1) Drilling activity & outlook

In the middle of this month (February 2021), there were **245 rigs drilling horizontal wells** in these 4 basins, up from 143 in August 2020. This still represents a decline of over **50% since early 2019**, but at this level, tight oil output is unlikely to fall much further from the current level of over **6 million b/d** within these basins:

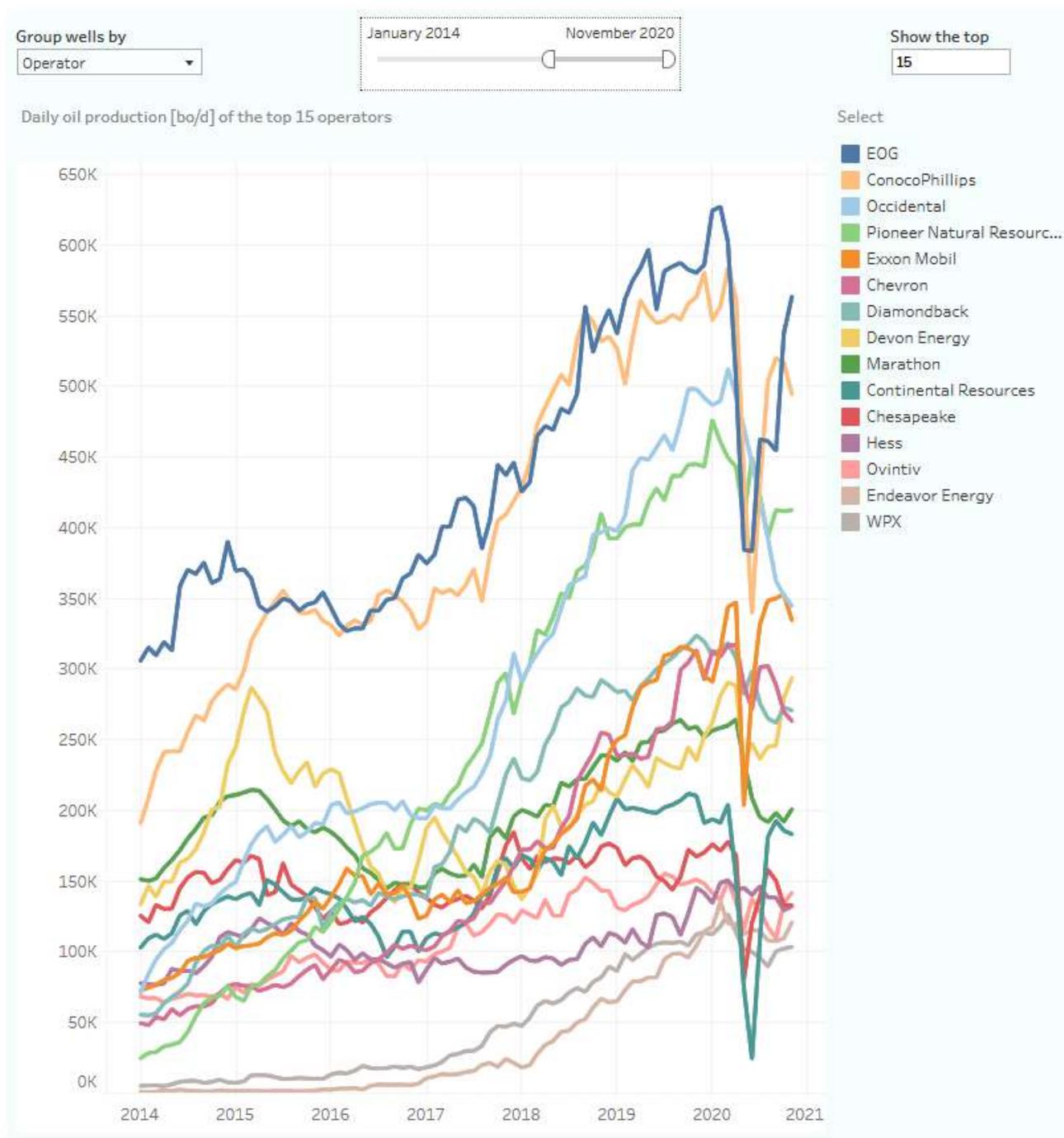


The projected tight oil output shown in the bottom chart assumes that the rig count (plotted in the top chart) stays constant and that rig/well productivity also remains unchanged. These are all unlikely assumptions, but it's an interesting base case nonetheless. The interactive version of this dashboard allows you to create projections based on your own assumptions.

In the scenario above, tight oil output will stay above **5 million bo/d** and the portion produced in the Permian continues to grow. This projection will probably err on the low side in the near term, given that the trend in drilling activity is clearly upwards.

2) The top oil producers

The following dashboard gives an overview of the **top-15 oil producers** within these basins.



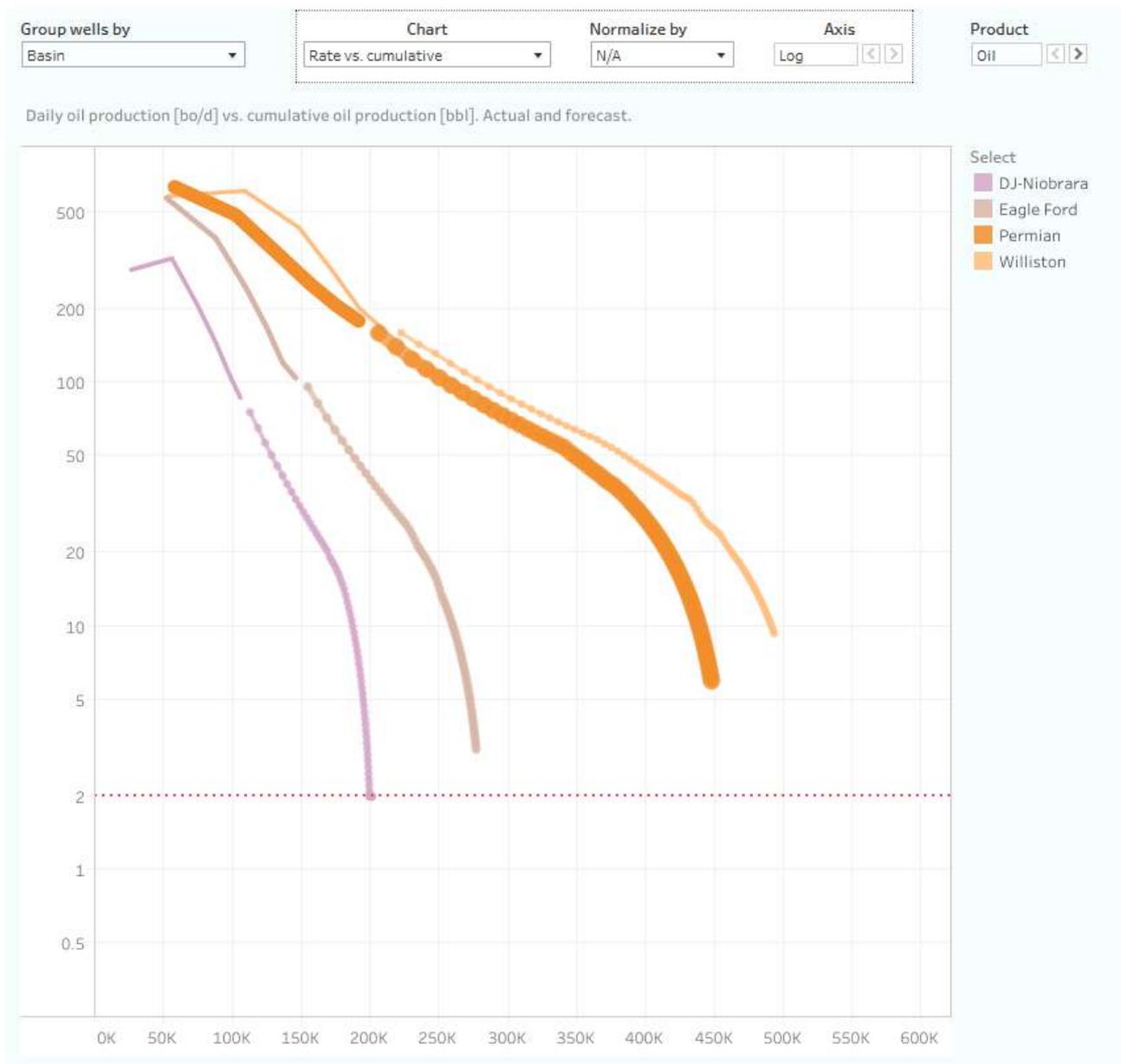
In this graph, all historical production from a well is allocated to the operator which is currently operating it (in the interactive version this can be changed). This explains why suddenly (after its recent acquisition of Concho) ConocoPhillips' historical production is close the EOG's. Pioneer Natural Resources bought Parsley, and soon Devon's acquisition of WPX will also be reflected.

Occidental shows a notable **production decline in 2020**, as it completed fewer than 300 wells during last year.

3) Well performance comparison (by basin)

How do these 4 basins compare in terms of well performance?

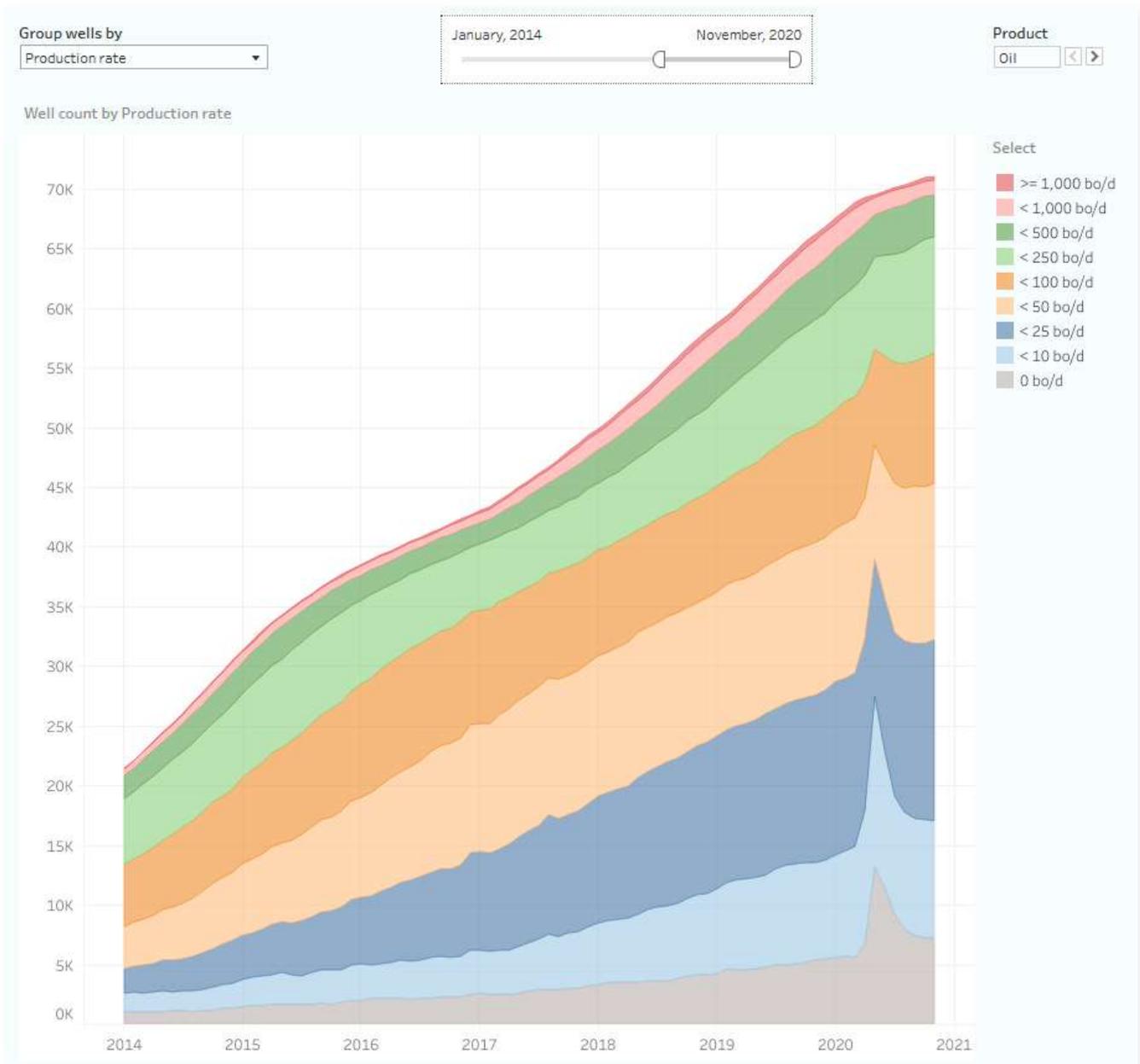
In the following chart, you can see the actual, and projected type curve for the 2019 vintage in each of these basins:



Only horizontal oil wells are included and the thickness of the curves indicates the relative well count. Whenever we receive new production data, we update these production forecasts (for both oil & gas, on well level) automatically. They are 20 years long.

The chart shows that we expect that the average horizontal well that came online in the Permian in 2019 has an oil EUR of **450 thousand barrels** vs about **500 thousand** for those in the Bakken. Performance in the other basins is far lower on this metric, although more associated gas is produced there.

4) Well status

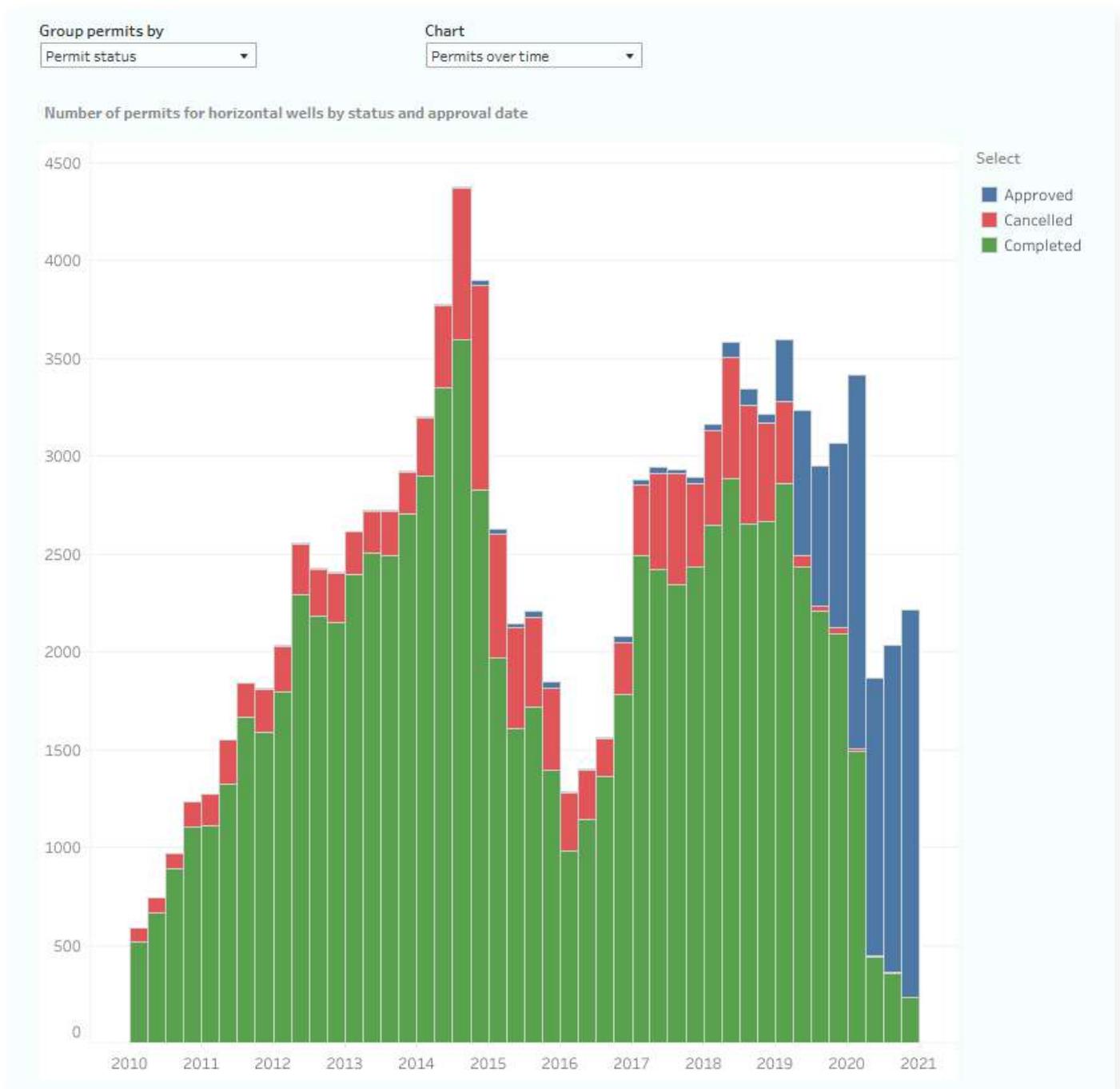


Since the start of 2014, the number of producing horizontal oil wells in these basins more than tripled (21,456 -> 70,965), but the number of wells that are producing below 25 barrels of oil per day increased almost 7-fold (4,695 -> 32,209) as is visualized by the top of the dark blue area. Now almost half of the wells fall in this category.

The many shut-ins that happened during **April-July 2020** are also clearly visible in this chart.

5) Permit activity

Last year we introduced a new dashboard in which permit activity can be easily monitored. In the following chart we can see how the number of permits for new horizontal drills within these 4 basins has evolved since 2010:



The total number of approved permits is displayed here, by quarter and by permit status. It reveals that in **Q4 2020 permit activity continued to increase (with 2,211 approved permits)**, after the 3-year low in Q2.

The interactive version of this dashboard allows you to see which operators submitted these permits and where the permitted locations are exactly.

Want to further explore industry data?

You can directly request a free trial via shaleprofile.com/trial to try out ShaleProfile Analytics for 10 days.

All the graphs shown today come from our **ShaleProfile Analytics service**, which is an online analytics platform filled with interactive dashboards that allow you to explore the most recent shale oil & gas related data.

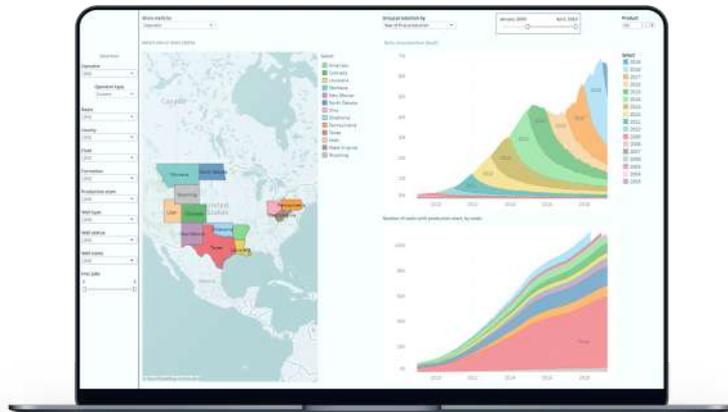


ShaleProfile

Designed for a complete understanding of US Shale. Access to our interactive dashboards or comprehensive database allows you to easily analyze production and completion trends on over 140 thousand horizontal wells across 13 states.

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