

Oil Outlook: Top of cycle or new plateau?

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When Colorado's oil and gas industry scraped bottom two years ago, companies were asked what they were doing to survive and to prepare for the recovery.

Even with prices at record lows, everyone agreed the downturn would not last and recovery was inevitable.

Companies surveyed at the time were hunkered down but optimistic. They cut capital expenses, reduced staffs and bullied oilfield service companies into bare-bones contracts.

When prices finally showed signs of recovery this past year, most exploration and production companies signaled their return not by announcing expansive new drilling programs.

Instead, operators have stair-stepped their increases and forecast modest capex budgets compared to 10 years ago, according to industry analysts.

DUC HUNTING

In the Denver-Julesberg Basin, unlike other regions, companies have increased hydraulic fracturing operations and bought wells drilled but not completed into production.

In fact, of the domestic oil producing regions, operators in the Niobrara are taking their drilled but uncompleted wells, or DUCs, off the table at a faster rate than elsewhere, according to the latest Drilling Productivity Report from the Energy Information Administration.

Though operators in other hot shale plays such as the Permian and Eagle Ford continue to add DUCs to their balance sheets, in the Niobrara the number of uncompleted wells in June fell to 431, a decrease of 42 DUCs in one month.

Part of the reason so many DUCs still are on the pond elsewhere is the new economics of specialized horizontal drilling rigs and multi-well pads, said Sarp Ozkan, director of energy analysis at DrillingInfo in Littleton. In the Permian for example, logistical bottlenecks force

operators to hold off completions when it becomes apparent the new barrels will have nowhere to go.

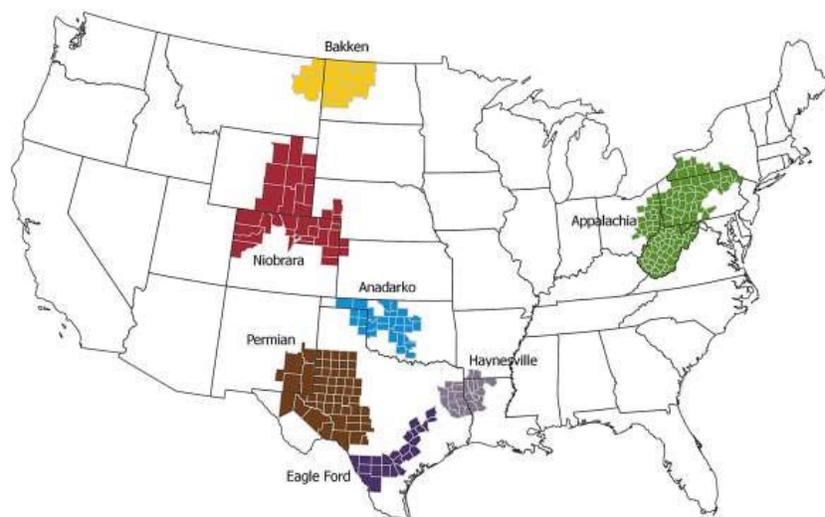
The issue, Ozkan said, is limited pipeline capacity means producers are forced to take less for their oil.

Eight years ago in the Bakken, and in the DJ to a lesser extent, operators were faced with deep discounts because the few oil pipelines serving the region were full. Today, it is the producers in the Permian faced with discounts of \$15 per barrel.

"Right now, the bottlenecks are around the Gulf and from the Permian," Ozkan said. "All that new production there has filled the pipelines to capacity, and there are no new projects scheduled until April."

"It is no surprise the differential between (benchmark) WTI at Cushing and Midland runs as high as \$15," he said, adding gas and gas liquids processing in the Permian likewise has not kept up with growing production.

"All that associated gas has nowhere to go and so they are looking at gas differentials of \$1 (per thousand cubic feet)," he noted. Typically, every barrel of oil produced includes a quantity of natural gas that must be removed before the oil is shipped.



As a result, the growing pains facing operators in the Permian give companies in the DJ and Bakken an advantage.

Gas processing and takeaway capacity is sufficient in the DJ, for now at least, Ozkan said. In the Bakken, opening of the Dakota Access Pipeline last year provides more than enough capacity to move oil to Cushing.

PRODUCTION MILESTONE

Ozkan observed the industry appears near mid-cycle and will continue to grow production for many months to come.

"Production in the U.S. passed the 10 million barrels per day mark in November," he said. This summer, production grew to more than 10.5 million barrels per day and is expected to climb to 11 million by the end of the year.

"We have already surpassed Saudi Arabia as the second-largest oil producer," Ozkan noted. "If we keep up this pace, we could pass Russia by the end of year."

Ozkan added the effects of production quota increases announced by OPEC and by Russia in June have not yet been felt by the markets. However, he does not expect large price impacts because of the reduced oil output by Venezuela and Libya.

"Oil is truly a global commodity and what happens overseas has a direct effect on markets in the U.S.," Ozkan said.

GROWTH IN THE DJ

The DJ Basin now is widely recognized as one of the hottest plays in the country, Ozkan said.

Compared to other areas, the DJ Basin has two things going for it to reinforce the notion of a strong upcycle here, Ozkan noted. The first is the oil-bearing formations of the DJ — three benches in the Niobrara and the Codel — are better defined and documented than in other basins.

Though there is always an element of risk in drilling a mile-deep hole that then goes out a mile-and-a-half, in the DJ finding the right zone out of four well-documented formations instead of dozens of possible targets found elsewhere reduces the risk for local producers. Combine that with steady improvements in completion techniques and the risk drops to near zero, Ozkan said.

The second is the DJ is the province of a relative handful of successful operators who have had years to assemble acreage positions well-suited for high efficiency production. Other plays, such as the wide-open Delaware flank of the Permian and even Wyoming's Powder River, dozens of exploration and production companies, from mom-and-pop to international majors, still are scrambling to piece together favorable positions.

Add to this an available pool of qualified workers, enough oilfield service companies to keep rates competitive and infrastructure that is up to the task and the DJ looks like a winner.

The result is a steady upturn of industry activity. A recent state-by-state report from the Energy Information Administration recognized progress in the DJ with an acknowledgment that Colorado likely will soon pass California as the sixth-largest oil producing state.

For the six months ending in April, oil production in California declined from 475,000 barrels per day to 462,000. At the same time, Colorado's oil production rose to 451,000 barrels per day from 417,000, an increase of 8.1 percent.

More encouraging news is found in the latest information administration's production forecast. Issued in mid-July, the agency's report projects Niobrara oil production will increase by 6,000 barrels per day from July to August. Grouped by oil-bearing formation, the Niobrara includes oil produced in Wyoming and Colorado, according to the information administration.

Looking further down the road, the administration forecasts Niobrara production to continue growing next year, although at a more moderate pace. The agency forecasts Niobrara oil production to average 679,000 barrels per day in 2019, an increase of 71,000 over this year.

IMPORT EXPORT SWING

Nationally, Energy Information Administration estimates that U.S. crude oil production averaged 10.9 million barrels per day in June, up 0.1 million from May. The administration forecasts U.S. crude oil production to average 10.8 million barrels per day in 2018, up from 9.4 million in 2017, and to average 11.8 million barrels per day in 2019. If realized, this would surpass the previous record of 9.6 million barrels per day set in 1970.

The effect of this steady increase in domestic oil production means fewer barrels are imported from outside the U.S.

The administration forecasts that total U.S. crude oil and petroleum product net imports will fall from an annual average of 3.7 million barrels per day in 2017 to an average of 2.4 million in 2018. Next year, oil imports are forecast to hit an average of 1.6 million barrels per day, which would be the lowest net imports since 1958.

The growth in production this summer is driven by commodity prices that have risen at a more measured pace compared to eight year ago.

Between January 2009 and June 2014, prices rose from \$41.7 per barrel to \$105.8 per barrel. Then in late 2014, the bottom dropped out of the market. From February 2015 to February 2016, prices slid from \$75.8 per barrel to rock bottom at \$30.3 per barrel, a level not seen since May 2003.

Over the following year, prices rose by \$23 per barrel to \$53.5 in February 2017. Twelve months later, prices had risen by \$8.8 per barrel to \$62.23. As of mid-July, the Energy Information Administration reported spot price for West Texas Intermediate crude oil at Cushing was \$67.9 per barrel.

Oil price stability, for the near-term at least, is expected, according to a report from BMI Research, of London.

In July, the global research firm reported that it had bumped its 2018 annual average price for Brent crude to \$75 from \$73 per barrel, and to \$80 from \$78 barrel for 2019.

The firm notes that its forecast for global energy demand remained "broadly bullish" but risks for continued growth are rising.

