New Mexico's crude output has reached its highest level in at least 35 years, thanks to flourishing activity in the Northern Delaware area of the greater Permian Basin, and is expected to continue climbing on a fresh burst of drilling in the state's southeastern Lea and Eddy counties.

A combination of larger initial oil yields per well on top of higher crude prices has seen renewed interest this year in the northern part of the Delaware sub-basin, analysts say.

"There are 58 rigs running in New Mexico," said Scott Dawson, bureau chief of Administration and Compliance at the New Mexico Oil Conservation Division, the state's oil and gas regulator. "A year ago there were 19."

Most of the activity is along the Lea-Eddy border, Dawson said.

The Delaware basin is the western edge of the greater Permian Basin of West Texas and southeast New Mexico. New Mexico now produces around 420,000 b/d of crude. Since 1981 the state's oil production had hovered from around 160,000 b/d to 200,000 b/d. But in 2011 production began to soar and in early 2015 -- just as an industry downturn was getting underway, production cracked 400,000 b/d.

The Northern Delaware produces about 380,000 b/d of that, according to Platts Analytics' Bentek Energy data, compared with 186,000 b/d in April 2011.

Climbing initial outputs from Lea-Eddy wells are yielding "attractive" returns, Bentek analyst Matt Andre said.

At current oil prices, internal return rates in Lea County average nearly 56% (Eddy is lower at nearly 27%), while southern Delaware counties in Texas average around 32%, Bentek data show.

But a year ago, IRRs in the Delaware were 13.5% at oil prices of $40.47/b, and initial output rates were around 550 b/d. They currently average around 669 b/d, with Lea County at 837 b/d and Eddy at 525 b/d.

The price rally over the past year increased the IRR in the Permian Delaware by 16 percentage points and efficiencies increased it by 5.5 percentage points, bringing the current IRR for the Permian Delaware to 35% at an oil price of $50.84/b, Andre said.

A lot depends on the operator, said Michelle Michot Foss, chief energy economist and program manager for the Bureau of Economic Geology's Center for Energy Economics at the University of Texas-Austin.

"Wellhead returns (on the best wells) are one thing," Foss said. "Company returns (how many of those best wells do you have?) are another."

For some very efficient operators, Northern Delaware return rates can be "almost triple digits," Greg Armstrong, CEO of Plains All American Pipeline, said earlier this year in a conference call.
"And if you cut the price of oil and the price of gas and you actually assume lesser efficiencies, you're still dealing with something in the 30% to 40% range," Armstrong said.

ACQUISITIONS TURN UP THE HEAT

Dawson expects New Mexico's production to inch higher, not just to more drilling by existing players on current leases but a rash of specific Northern Delaware acquisitions by large players that are likely to further turn up the heat.

For example, just last month Marathon Oil -- a major player in the Bakken and Eagle Ford Shales and the Oklahoma basin -- entered the Permian Basin with a $1.1 billion, 70,000-acre acquisition from privately held entities.

Three-quarters of the acreage was in the northern Delaware. Two weeks later, Marathon followed that up with a $700 million, 21,000-acre acquisition from Black Mountain Oil & Gas, virtually all in the northern Delaware.

And in January, ExxonMobil purchased 275,000 acres in the New Mexico Delaware from companies owned by Fort Worth's Bass family for $5.6 billion upfront and as much as $1 billion of contingent payments starting in 2020. ExxonMobil said the assets contain estimated resources of 3.4 billion barrels of oil equivalent and characterized the northern Delaware as "highly prolific."

In addition, late in 2016 EOG Resources closed a $2.5 billion acquisition of Yates Petroleum, a legacy company which EOG claimed drilled the first commercial oil well on New Mexico state trust lands in 1924. An EOG map during the deal announcement shows Yates Delaware leases weighted to New Mexico.

The average lateral length of Concho Resources’ nearly 12,000 horizontal Northern Delaware locations has increased by 50% in 2016. The company is trying for longer laterals (horizontal well legs) since they improve returns, Executive Vice President and Chief Financial Officer Jack Harper said during a company conference call in February.

"By extending our lateral lengths, downspacing [decreasing spacing between horizontal well legs] and identifying new zones, our total resource in the Northern Delaware ... increased by nearly 40% to 4.8 billion barrels," Harper said. "We have proved that increased density works in the majority of our prospective zones." The company is running more than a third of its average 21 Permian rigs this year in the northern Delaware, he said.

QUALITY GETS LIGHTER

Northern Delaware crude is currently sold to local refineries and piped out of the area along with other Permian crudes into the US Gulf Coast and Midwest. But the quality of Delaware crude is getting lighter, in contrast to Midland crude.

"Since 2010 the Midland (crude) has been very consistent, with 96% of the production reported below an API of 45 degrees," said Bentek analyst Jenna Delaney. "In the Delaware, the production mix has shifted over time, with 94% of the production below an API of 45 in 2010, but only 66% of production below that level in 2016."

Most of the change has shifted to an API of 45-50, although an increase has also been seen in the 55 and over API production, she said.

With US crudes geared up to run the heavier barrels, those lighter grades will likely be exported from the USGC.

Pipeline companies have been increasing takeaway capacity out of the Permian Basin, with the most recent projects aimed at moving crude to the USGC for export. However, Plains All American Pipeline announced an open season for a 350,000 b/d crude line to Cushing, Oklahoma.

The Midland WTI crude price has weakened relative to Cushing WTI over the past two months, suggesting pipeline capacity is not keeping up with production growth, or that high inventories at Cushing were backing out Midland barrels. Midland WTI has averaged at a $1.38/b discount to Cushing WTI so far in April, out from an 85 cents/b discount in March and a 20 cents/b premium in February, according to Platts assessments.

That spread will likely tighten as pipeline capacity increases. The 300,000 b/d BridgeTex Pipeline -- a 50:50 joint venture between Magellan Midstream Partners and Plains -- is due to be expanded to 400,000 b/d by the end of the second quarter.

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