Energy Pipeline: Delaware Basin in Texas sees growing presence

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If companies learned anything from the oil price downturn, it is that efficiency without access to a viable, long-term resource is not how to survive into the next decade.

That long-term resource could be an acreage position in the Delaware Basin.

The Delaware Basin is now the most active oil and natural gas field in the country, said Bernadette Johnson, an energy analyst in the Littleton office of DrillingInfo, a Texas-based provider of data analytics and consulting services.

"The Delaware resource is vast," she said. "When you consider there are up to 15 potential target formations stacked in a zone up to 2,000 feet thick, or more, that's considerable. Compare that to target formations of 250 feet or less in the Bakken and between 250 and 500 ft. in some parts of the Niobrara."

The Delaware also stretches over several counties in southwest Texas and southeast New Mexico. The combination of stacked formations and mile-after-mile of surface area make the Delaware a most attractive investment, she added.

"A typical square mile section with 80-acre spacing can hold eight wells," Johnson observed. "If you can drill into just four stacked formations, you can produce the equivalent of 32 wells. The potential return on investment just escalates from there."

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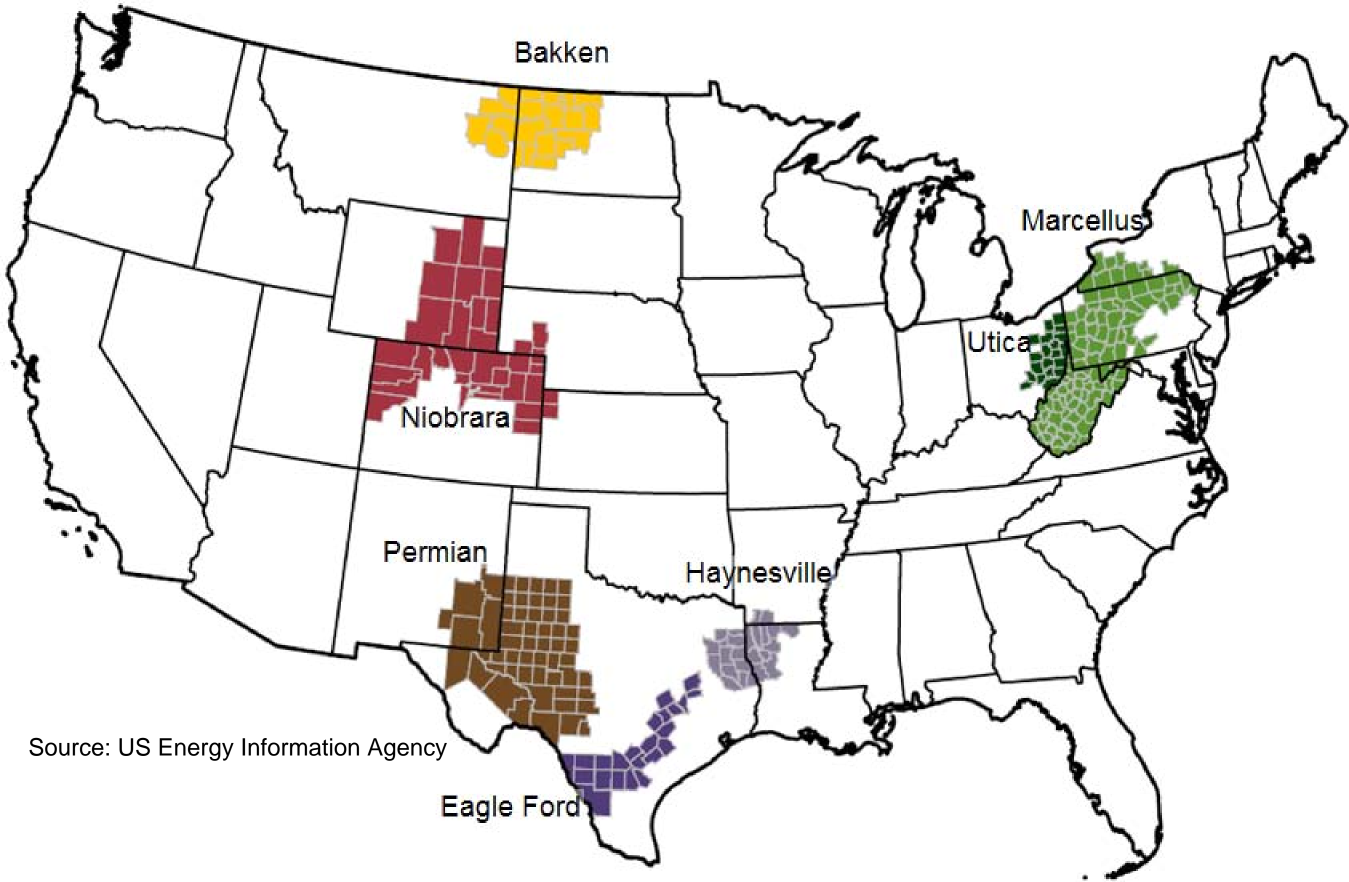
As companies relentlessly pursue drilling and completion efficiencies, the attraction of a resource like the Delaware shines through. Research from DrillingInfo shows break-evens, the minimum an operator needs to sell a barrel for to cover expenses and return 15 percent to investors, give the Delaware a sizeable advantage over the DJ.



Bakken
Marcellus
Utica
Niobrara
Permian
Haynesville
Source: US Energy Information Agency
Eagle Ford

A low-cost barrel of oil from the Bone Spring formation in the Delaware shows a breakeven price of $26.29. A comparable, low-cost barrel from a Wattenberg formation will breakeven at $37.39, according to the DrillingInfo report.

Basins like the Niobrara will remain active as established companies like Anadarko, Noble and PDC develop core areas and others drill-up leases in areas already held by production.

"Activity in the DJ will continue for at least the next decade," Johnson noted. "In about 10 years things will start to slow down as companies begin to run out of places to drill. That is not an issue in the Delaware. Nowhere else can you find so much surface over so many potential stacked formations."

As part of the greater Permian Basin, the Delaware is a known topic.

"When you look at the history of unconventional development, companies used horizontal drilling and hydraulic fracturing to unlock the gas formations first," Johnson noted. "After the Barnett, Woodford, Fayetteville, Haynesville gas plays, the activity shifted over to crude, starting with the Bakken, Eagle Ford, Niobrara and finally, the Permian."

"The companies have taken the lessons learned over the past few years and applied them to the Midland and Delaware. After years of vertical and directional drilling, they know what the rock looks like. Now they have the key to unlock the door."

SHIFTING CAPITAL

Examples abound of increased activity and companies hitching their wagons to the Delaware.

By the end of the first half of 2017, some of the most active companies in the Delaware are also heavily invested in the Niobrara (see chart).

According to the Baker Hughes rig count for the first week in July, the rig count for the greater Permian Basin, of which the Delaware is a segment, was 369 rigs, up from 158 one year ago. For the same period, there were 27 rigs running across the DJ Basin, up from 15 last year, and 52 rigs in the Williston (Bakken) Basin, up from 28 last year.

A few companies stand out as examples of sharply increased interest in the Delaware.

CAPITAL SPOTLIGHTS

In its most recent investor pitch, Denver-based PDC Energy noted that it will spend $465 million of its $750 million 2017 capital budget running four rigs and completing about 140 new wells in the Wattenberg. The company said it expects that investment to grow its Colorado production by 30 percent.

One year ago, PDC's investor guidance did not even mention investments in other than its core operations in the Wattenberg and Utica shale in Ohio.

Then in August 2016, the company bought 57,000 net acres in the Delaware from a pair of private equity holders for $1.5 billion. It later added 4,500 acres in a "bolt-on" acquisition for $118 million. In June, PDC announced it will spend about $290 million running four rigs to develop its Delaware assets. Of that, PDC will invest $35 million in midstream gathering and compression and another $30 million on leasing and seismic surveying.

Carrizo Oil & Gas announced in late-June that it expanded its presence in the Delaware by acquiring 16,000 net acres for $648 million. The company already held 26,100 acres in the Delaware, 103,300 acres in the Eagle Ford in east central Texas and 31,200 in the Niobrara.

The Delaware acquisition gives Carrizo "the potential for decades of drilling locations across multiple stacked pay horizons."

Of the company's $620 million capital outlay this year, $390 million will go to the Eagle Ford, $15 million less than was planned before the acquisition. Carrizo's Delaware investment will increase to $150 million with $25 million earmarked to Carrizo's other development programs, including the Niobrara.

Carrizo notes that new well completion techniques in the Niobrara are expected to see a 20 -30 percent improvement in production while it is reviewing potential Codell formation pay zones that could add another layer of Niobrara production.

Anadarko notes that both the DJ and Delaware basins are focus areas for this year's capital budget. It reports 15 rigs running in the Delaware and six in the DJ.

With plans to spend about $820 million on new wells in the Delaware, Anadarko says it will also allocate an additional $560 million in expanding its midstream asset base "to enable future growth."

Noble, the second largest producer in the DJ, also positions itself as the second largest operator in the southern Delaware.

Following the first quarter acquisition of Clayton Williams Energy that added 71,000 net acres to its Delaware position, the company shifted some midstream assets to its affiliate, Noble Midstream Partners, and raised cash by selling its operations in the Marcellus for $1.12 billion.

The company claims its expertise with long-lateral wells, its access to midstream infrastructure and the higher value liquids produced in its Delaware operation give Noble an advantage over other operators.

The sheer size of the Delaware assures that it will attract large chunks of capital from oil companies for years to come. From an investor's point of view, the outlook for the Delaware is the difference between return multiples and break-evens.

The billions invested in the Delaware will see many years of strong production but at the cost of the investments traditionally needed to sustain production in older oil fields.

DECLINING AGE

Another, less considered outcome of the price downturn has been the dramatic decrease in investment, and resulting drop in production, from mature fields.

As companies, and nations, go head-to-head to gain a greater share of the global petroleum market, shale is seeing the bulk of investment capital. Older fields, especially those with little horizontal drilling potential, are harvested with just enough spent on operations to pump another barrel.

According to the Norwegian consulting firm, Rystad Energy, output from older fields around the world declined 5.7 percent last year, the sharpest fall-off since 1992. This year looks to be even worse, with production projected to decline by about six percent if oil prices stay constant.

A lack of investment in mature oil fields is cause for concern, analysts say, because older fields produce about one barrel in every three that comes onto the world market. Most of the declining production is seen in China, where production from older fields dropped by nearly 10 percent last year, three times the decline rate of 2015.

In the U.S., mature field production fell 8.3 percent in 2016 following a decline of 11 percent in 2015, Rystad noted.

The upshot of this decline, if it continues, is removal of about 1.8 million barrels/day from the global market. That amount is significant in that it is the same volume OPEC agreed to voluntarily keep off the market to support prices last year.

The pair of questions that surround the decline in mature field production are, first, how long before the effect of fewer barrels on the market is seen in strengthening prices; second, as investments are withdrawn from the traditional techniques for squeezing more barrels from an aging field, will those fields wither to become stripper well territory?