CRUDE OIL PRODUCTION PUTTING PRESSURE ON TAKEAWAY INFRASTRUCTURE

BY TRACY HUME • FOR ENERGY PIPELINE

The DJ Basin's recent oil production boom has just one hitch: a shortage of takeaway capacity.

The unprecedented increase in crude oil production is straining the capacity of the DJ Basin's midstream infrastructure and threatens to outpace the capacity of the transport methods - primarily pipelines and railways - available for carrying the crude to refineries for processing or on to distant markets.

According to Bentek Energy, an energy market analytics company headquartered in Denver, crude oil production in the DJ Basin averaged 150,000 barrels per day (b/d) in 2013. Bentek is forecasting that number will increase by 300,000 b/d to 450,000 b/d by 2019. According to Ryan Smith, senior energy analyst at Bentek, "DJ Basin crude oil production is expected to remain mostly pipeline-constrained through the next five years."

The shortage of takeaway capacity means that producers (shippers) sometimes squabble over access to that capacity. One such dispute happened this summer, as White Cliffs Pipeline prepared to double its pipeline capacity out of the DJ.

White Cliffs Pipeline is the only pipeline that moves crude oil directly out of the DJ Basin and on to Cushing, Okla., a major hub for connecting crude oil supply with Gulf Coast refineries. The White Cliffs Pipeline includes two, 12-inch, common carrier pipelines that originate in Platteville and continue for 526 miles to in Cushing.

In 2008, when White Cliffs' first pipeline was constructed, it had an initial design capacity of approximately 30,000 barrels of crude oil per day, according to Kiley Roberson, media relations and communications analyst for SemGroup Corporation, whose limited partnership, Rose Rock Midstream, operates White Cliffs Pipeline.

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As crude oil production in the DJ slowly increased, White Cliffs incrementally increased the capacity of its pipeline to 55,000 b/d by adding pump stations.

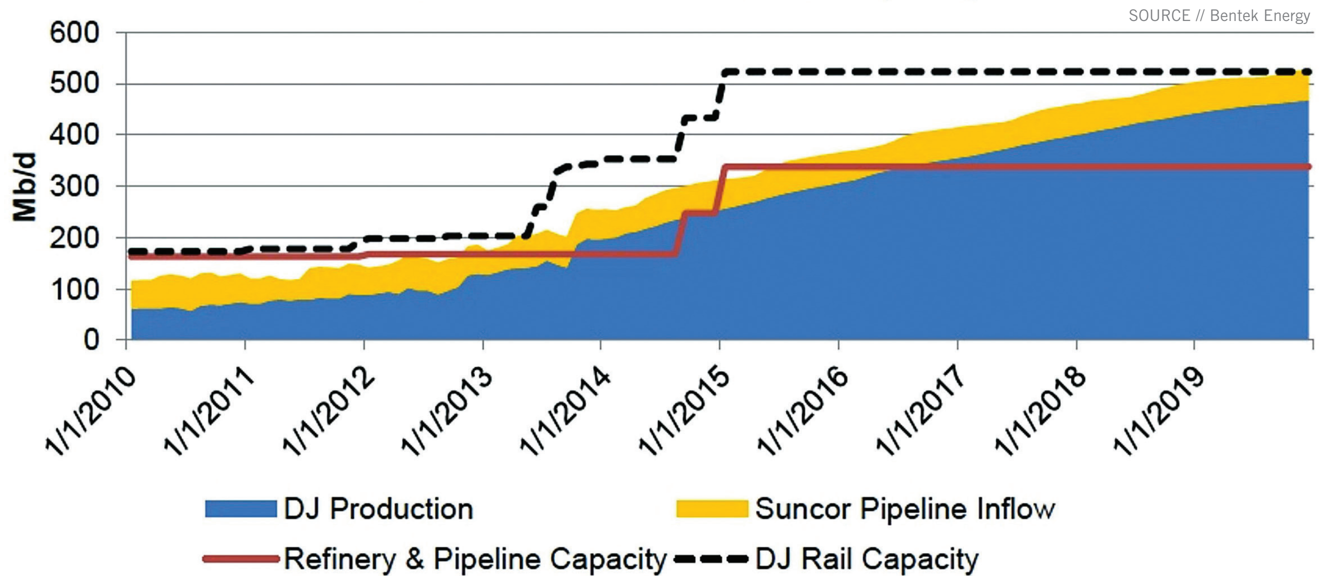
By 2012, oil production had increased enough that White Cliffs was considering twinning the pipeline, that is, building a second pipeline alongside the original one. White Cliffs held a binding open season to determine shipper interest in an expansion of pipeline capacity. A binding open season provides an opportunity for shippers to support pipeline expansion by making binding volume commitments to ship on the expanded pipeline. At that time, White Cliffs obtained sufficient volume commitments to allow it to move forward with the pipeline expansion, although it did not receive commitments for all of the anticipated available capacity.

Fast forward a year and a half to this spring: the second pipeline was nearly complete. On May 9, 2014, White Cliffs filed a "Petition for Declaratory Order" with the Federal Energy Regulatory Commission so that service on the new pipeline could begin Aug. 1.

Not so fast, said Noble Energy Inc. and Kerr McGee Oil and Gas Onshore. Although Noble and Kerr McGee agreed with the need for the pipeline expansion, they disagreed with the way the expanded capacity was allocated.

After White Cliffs' open season ended in October 2012, White Cliffs made agreements with additional shippers, including Bonanza Creek Energy Inc., for the unused expansion capacity.

In a filing with FERC, Kerr McGee argued that by making additional agreements after the open season had ended, "White Cliffs failed to comply with its own open season procedure



and commission policy." Kerr McGee further argued that "market conditions have changed since the 2012 open season" and "White Cliffs cannot rely on the 2012 bids to determine whether shippers are interested in surplus expansion capacity."

Indeed, market conditions had changed significantly in the two years between the close of the original open season in 2012, and the date the expansion pipeline was to go into service in 2014. Data provided by the Colorado Oil and Gas Conservation Commission show that in 2012, applications for permits to drill horizontally numbered 1,190. By the 2013, the number of applications for permits to drill horizontally nearly doubled to 2,261.

"It's about production growth," said Smith. "Five years ago, production was flat to declining in Colorado. But with all the additions of horizontal drilling and other technological advancements, in drilling the Niobrara formation, that has really changed the production dynamic. They have recently really cracked the code in horizontal drilling around here, and that has resulted in the boom in oil production."

FERC agreed with Noble and Kerr McGee's arguments. On July 15, 2014, FERC ruled that White Cliffs should conduct a new open season to allocate the expansion capacity, and that any agreements White Cliffs made for expansion capacity after the original open season ended were void.

The FERC ruling was a topic of conversation in Bonanza Creek's second quarter earnings call on Aug. 8. In the call, Bill Cassidy, executive vice president and CFO for Bonanza Creek, said about the ruling, "it was really unprecedented. We hadn't seen that happen before."

Cassidy also indicated at that time that Bonanza would be participating in the White Cliff's new open season.

"Obviously there will be bunch of other operators going in there," Cassidy said. "Not sure we will get the volumes that we had agreed on before our agreement was nullified by FERC. But we will get after that in the open season and then look at some other options as well."

Among those other options are a project called the DJ Lateral, being built by Kinder Morgan Pony Express Pipeline LLC (Pony Express). The DJ Lateral will offer a way for production from the DJ to connect to Kinder Morgan's existing pipeline which runs from Guernsey, Wyo., to Kansas, and eventually on to Cushing.

In early September, Rimrock Midstream, LLC, and NGL Energy Partners also announced a joint venture crude oil pipeline originating in Weld County and terminating in Cushing. Initial capacity of the new pipeline, called the Grand Mesa Pipeline Project, is expected to exceed 130,000 b/d.

Meanwhile, the White Cliffs expansion project was completed in July and placed into commercial service in August, according to SemGroup's Roberson. Per FERC's direction, White Cliffs conducted a second open season, which closed Sept. 5. The second open season was conducted specifically to seek long-term binding volume commitments for 40,000 bpd of priority service on the recently expanded pipeline.

White Cliffs conducted a simultaneous open season to gauge interest in a new pipeline project. According to the announcement, "This new pipeline would possibly have multiple origin points in the DJ Basin and handle multiple grade of crude oil." The non-binding open season "affords all prospective shippers an opportunity to quantify their interest in a new pipeline and to indicate a preference for origin point."

According to Smith, Bentek definitely sees an opportunity for additional pipeline capacity out of the DJ. Although some producers are turning to rail transportation to move crude, "we think that producers would generally rather ship their barrels in a pipeline than pay more for rail transportation," Smith said.

"The main takeaway is that there is probably room for another pipeline project if White Cliffs wanted to expand or Pony Express or somebody new wanted to come in and build a pipeline," Bentek's Smith said, "There is probably still room to build more than 100,000 barrels a day of pipeline capacity."