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Have It All – Delaware Basin Crude Gathering and Shuttle Systems

Midstreamers in Fast-Growing Permian Region Scramble to Expand



- Permian crude oil production has increased 140% since mid-decade and now averages 4.3 MMb/d; all signs point to continued growth through the 2020s.
- The Delaware Basin in West Texas and southeastern New Mexico accounts for 2.4 MMb/d of current Permian output, and Delaware production is forecasted to approach 4.0 MMb/d by 2024.
- The pace of drilling-and-completion activity has been spurring the expansion of existing gathering systems and the development of new ones; larger-diameter shuttle pipelines have also been added.
- These systems play two important roles: provide reliable and cost-effective delivery of crude from the lease to takeaway pipelines, and optimize shippers' destination optionality.
- With the flexibility to send their crude to multiple destinations — the Cushing Hub and Gulf Coast points such as Houston and Corpus Christi — shippers can earn higher netbacks.

1. Introduction

The greater Permian Basin, which includes all or part of 54 counties in West Texas and southeastern New Mexico, has been producing crude oil in commercial volumes since the early 1920s. By 1960, the region's crude output was averaging 1 MMb/d, and through most of the 1970s, production there hovered around the 2-MMb/d mark. Transporting large volumes of oil to market efficiently and economically required the ongoing development of extensive crude gathering systems. The Permian story is not one of ever-rising production, however. Through the 1980s, '90s and 2000's, the region's crude oil output declined to less than 1 MMb/d, leaving unused much of the gathering capacity that had been installed. So, when Permian production finally started rebounding in the early 2010s with the fine-tuning of new techniques — a combination of horizontal drilling and hydraulic fracturing — there was a good bit of gathering pipe in the ground, much of which producers could use to help gather crude produced at their new horizontal wells.

By 2016, though, Permian production was back above 2 MMb/d, crude gathering pipelines — and takeaway pipes — were filling up fast and a big push was underway to expand existing systems and build new ones. This has been especially true in the Permian's Delaware Basin, which until the mid-2010s produced considerably less crude than the Midland Basin and had much less crude pipeline, storage and other infrastructure in place than the Midland. The need for an extensive

build-out of crude gathering infrastructure in the Delaware Basin in the past three-plus years has attracted a wide range of players, including producers themselves and midstream affiliates of producers. In other cases, producers partner with unaffiliated midstream companies to help them develop systems to meet their crude-gathering needs — and, often, the gathering needs of producers with wells close by. And sometimes, individual midstream companies or joint ventures of two or more such firms pursue the development of gathering systems in areas where drilling activity is intensifying — in these cases, the midstreamer or JV would often seek to line up an “anchor” producer to jump-start the project, then work to sign on additional producers in the same area.

The ownership of crude gathering systems and other midstream assets within the Permian has also evolved over time. In many instances, the systems have been expanded through a combination of organic growth and acquisitions, often with the involvement of new midstream companies backed by private equity. As some of these systems grew, established good relationships with producers, and increased their fee-based revenue streams, they became attractive targets for acquisition themselves.

In the first part of a two-part Drill Down Report on Permian crude oil gathering systems, we focused on representative systems within the Midland Basin. In this report — Part 2 — we look at systems in the Delaware Basin.

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