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## Upside Down

### *Will the Low-Production, High-Price Condensate Market Flip Again?*



- Historically, U.S. field condensate was a backwater of liquid hydrocarbon markets, with most condensate blended off into crude.
- The Shale Revolution changed that, increasing superlight crude and condensate production from about 400 Mb/d in 2011 to more than 1 MMb/d in 2015.
- Condensate and superlight crude production took a disproportionate hit from the crude price crash, falling to 875 Mb/d in 2016 and 760 Mb/d in 2017.
- As production was declining, demand for condensate was increasing from both new splitters and exports, tightening the market and pushing condensate to premium price levels.
- In 2018, condensate production is increasing again, with gains coming not only from the Eagle Ford but from the star of the show in crude oil markets: the Permian.
- When moved on area pipeline systems, these Permian barrels incur a penalty when blended with more common Permian crude streams, but when kept "neat" or segregated they can realize a premium.

### 1. Introduction

The past five years have been a real roller coaster for the class of hydrocarbons known as condensates. That is quite a contrast to the previous 50 years, when condensates — also known as conde (pronounced "condy") — were a proverbial backwater of energy commodity markets, ignored and forgotten except by accountants who had to tabulate the few barrels produced. Most of those conde barrels never made it beyond a few miles from the lease — they were blended off into crude oil near the wellhead or at a nearby terminal.

But then Shale happened. More specifically, shale happened to the Eagle Ford region in South Texas, which yielded a disproportionate share of condensate barrels. Conde production ramped up in the Eagle Ford and a few other plays, condensate prices were discounted to move the product, markets were developed to absorb the barrels, and infrastructure was built to move the conde to those markets.

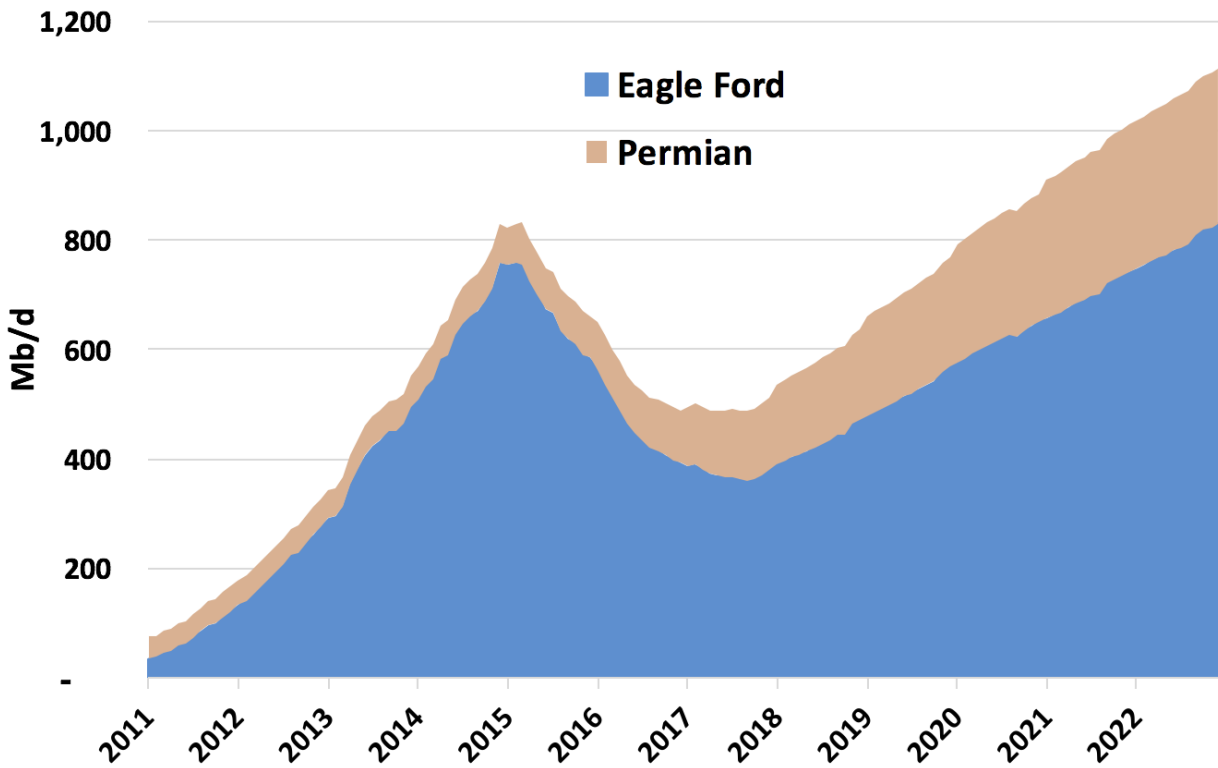
Then, crude prices collapsed in the second half of 2014 and the air came out of the nascent condensate market. One-third of the new supply evaporated, the new conde markets (splitters and exports) were starved for product, and condensate prices flipped from discounts to premiums. Conde retreated to backwater status. However, today the market is shifting again. Condensate

production is once more on the rise, with a big slice coming not from the Eagle Ford, but from the star of the show in crude oil markets: the Permian.

But not all of the Permian. Crude produced in most of the basin falls within a more classic quality band: with an API gravity (in degrees) from the upper thirties to the low forties — around the range of light-crude benchmark West Texas Intermediate (WTI). But some of the fastest-growing parts of the Permian, such as West Texas's Culberson County and nearby areas along the state line between Texas and New Mexico, are consistent producers of crude oil with API gravities of 50 degrees API and higher — barrels that are classified as superlight crude (50 to 55 API) and condensate (API higher than 55). When transported on area pipeline systems, these barrels incur a price penalty when blended with more common Permian crude streams, but when kept “neat” or segregated and moved to condensate-hungry markets they can realize a premium, whether the market is onshore (splitters) or offshore (exports). For that reason, Plains All American is batching condensate on its Cactus Pipeline from the Permian to Corpus Christi and other pipelines are handling more neat condensate as segregated batches.

The big question is this: What happens next? Will U.S. condensate continue to be in short supply and thus priced at a premium, which limits its opportunities in export markets? Or might we see product surpluses re-emerge, and significant volumes of neat condensate again move into global markets? It largely depends on what happens to the absolute level of crude oil prices — the higher the price, the more condensate barrels will be produced, and at some point, that condensate production would again exceed the capacity of U.S. splitters and crude blenders to absorb it.

Consider the following production forecast for Eagle Ford and Permian superlight crude and condensate, based on RBN's Growth Scenario, which pegs the 2023 price for Cushing WTI at \$61/bbl (about \$10/bbl above the current forward curve). The Figure 1 graph shows that superlight-crude and conde production from these two basins combined would return to their early-2015 peak of 800 Mb/d by early 2020 and rise to 1.1 MMb/d in 2022. Superlight-crude and conde production from SCOOP/STACK, the Niobrara's Denver-Julesburg (DJ) Basin and other plays — including the Marcellus and Utica regions in the Northeast — would only add high-API crude and condensate to total U.S. production.



**Figure 1 – Eagle Ford and Permian Superlight Crude and Condensate Production; Source: RBN**

A major resurgence of superlight crude and conde production like this would only require crude prices staying pretty much where they are now — and the development of new conde-related infrastructure. If it happens, there would be more than enough condensate to meet the demand from the 335 Mb/d of existing U.S. splitter capacity (plus the 35-Mb/d splitter that Targa Resources is building at Channelview, TX), as well as refinery appetite for super-light material, and significant volumes of neat conde exports or crude blends that include conde and/or superlight crude.

In this Drill Down Report, we will review the U.S. condensate market, explore the drivers of conde production and examine the factors that could result in a renewal of neat condensate exports.

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