



Cushing & Houston Battle for Crude Dominance

Cushing, Oklahoma has been the center of the US oil pricing universe since 1983 when the New York Mercantile Exchange (NYMEX) began trading a crude futures contract and selected Cushing as the delivery point. But the transformation of the US Gulf Coast into a major oil export hub has generated lots of debate about the existing pricing system and whether it's fit-for-purpose. Could that mean Cushing's decades-long run might soon be over?

Houston has emerged as the leading candidate vying to replace Cushing as the US crude benchmark or even topple Brent as the global crude benchmark. That argument is founded on the premise the Gulf Coast has become the global swing supplier.

The major exchanges (NYMEX, Intercontinental Exchange) and price reporting agencies (Argus, S&P Global Platts) have responded by listing WTI Houston contracts. Yet the shift from Cushing to Houston is far from complete and might never happen. Benchmarks take years to establish and aren't dislodged easily -- especially if "not broken."

Cushing revival

The popularity of WTI crude futures at Cushing has benefited from US production growth. More output means greater need by producers for hedging instruments. Open interest in WTI crude climbed steadily higher starting in 2015 reaching an all-time high of 2.713 million lots on May 16, 2018. Average daily volume was around 1.22 million contracts in 2018 from January through August, more than double the levels seen before 2015.

The contract's popularity has also grown outside of the US reflecting the emergence of US exports onto the global scene. The percentage of average daily volume during Asian and European trading hours was only around 10% in late 2015 when legal restrictions on US exports were lifted. That figure has been roughly 18%-20% since November 2016. These trends create a healthy picture regarding WTI crude liquidity. That is a major advantage for WTI crude and will help the contract hold onto its benchmark status.

Rising stocks, lower prices

This also means Cushing will remain relevant among oil traders for the foreseeable future. The US Energy Information Administration (EIA) has released data on Cushing since 2004, as part of its weekly petroleum status report. The EIA collects data from respondents who complete a weekly survey on stocks. A relatively new method to measure inventories directly is by third parties using satellite imagery.

Ursa Space uses synthetic aperture radar (SAR) to measure inventories at 150 locations around the world every week, including Cushing. The Cushing figure is released separately in its own report every Monday at 9:30 am (New York). That is two days ahead of the EIA report. Recent data has shown builds at Cushing. Inventories have increased steadily since late September, topping 40 million barrels by mid-December (See Figure 1).

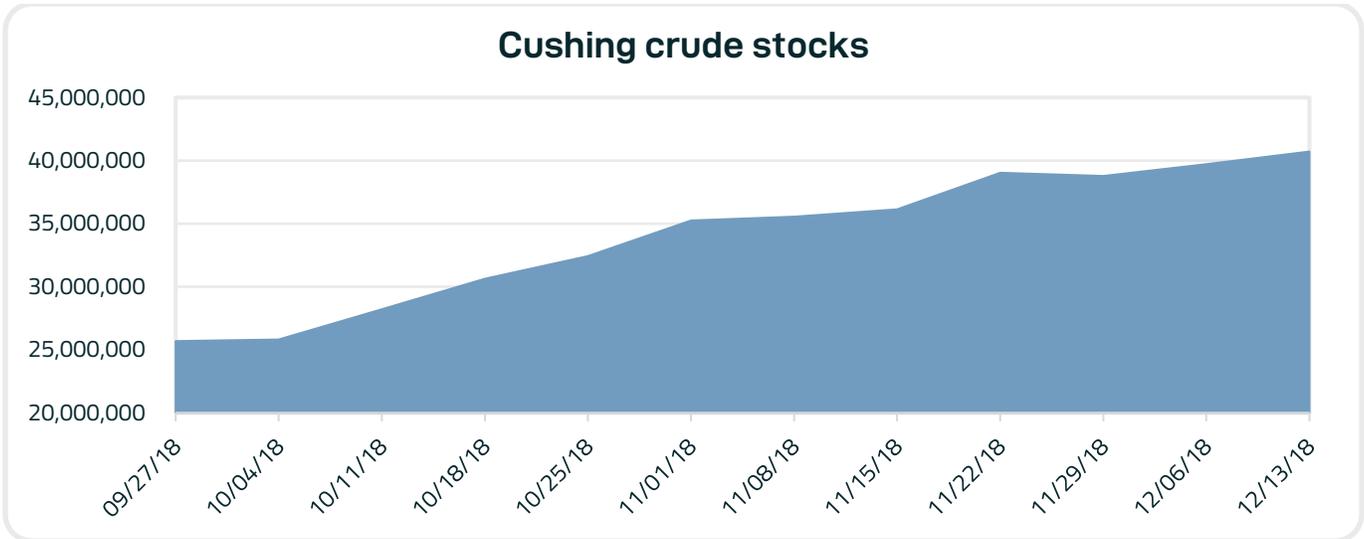


Figure 1 (Source: Ursa)

Higher inventories contributed to the plunge in oil prices. WTI futures settled October 3 at \$76.41 per barrels, a year-to-date high. On December 18, WTI futures settled at \$46.24/b, the lowest price since August 2017. A spread of around \$10 a barrel between WTI crude and Brent since September mostly reflects the lack of pipeline capacity between Cushing and the Gulf Coast.

Houston crude listing

More pipelines are being constructed, which should alleviate bottlenecks. And an active swaps market allows companies to hedge the price risk between Houston and Cushing/Midland. But there is still a sense some traders would simply prefer Houston over Cushing as the delivery point for a crude futures contract.

That intuition has led both NYMEX and ICE to list WTI Houston futures contracts, likely with different goals in mind. ICE can go on the offensive without much to lose if traders migrate from Cushing to Houston. The ICE-listed WTI Cushing contract ranks a distant second to the NYMEX contract in terms of open interest. "Houston has become the pricing center for U.S. crude oil production and exports, and the new Permian WTI

futures contract is designed to serve hedging and trading opportunities in this growing market," ICE said in an October 22 statement on the day of the contract's launch.

At the same time, ICE also listed a Houston/Brent spread contract which could become a key determinant for Atlantic Basin crude flows. The fact that NYMEX listed its own WTI Houston crude contract doesn't mean the exchange has abandoned Cushing. Perhaps the ideal outcome from NYMEX's perspective would be for Houston to attract open interest without cannibalizing Cushing. For that to happen, Houston would become a key reference price for Gulf Coast waterborne exports, but not a benchmark *per se*. One characteristic of a benchmark is the contract trades on a flat price basis as



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opposed to a differential. It's worth noting the NYMEX WTI Houston contract can trade on a flat price basis or as differential to Cushing. The latter would allow traders to hedge

the Cushing/Houston leg while still utilizing the highly liquid Cushing contract.

Gulf Coast storage

What is certain here? Well, the importance of Gulf Coast inventory will increase. The amount of oil in storage is part of the supply picture. Traders want this type of information to understand the region's fundamentals. Outside the US, waterborne exports are organized into monthly loading programs, which answer the basic question about available supply. No such program exists on the Gulf Coast. Nor can supply be measured solely in terms of the number of ships leaving Gulf Coast terminals every month. There is also storage sitting in tanks that must be considered.

EIA publishes PADD 3 (i.e. Gulf Coast) crude storage. But the market requires more granular data. That is because the region has yet to morph into a cohesive export zone. One big issue is the variability of physical characteristics. Not all WTI

crude sold on the Gulf Coast is the same. That's a difficult pill to swallow for refiners abroad accustomed to consistency when buying major crude grades. The quality differences can depend on whether the export terminal is connected by pipeline to the Permian Basin or routed through Cushing where blending occurs.

A buyer may therefore prefer one location over another. For example, a barrel sold at Magellan East Houston (MEH) terminal is more likely to conform to Permian WTI specifications. That is because supply reaches MEH from the Permian directly through the BridgeTex (400,000 bpd) and Longhorn (275,000 bpd) pipelines. Ursa monitors 11 locations on the Gulf Coast in Texas and Louisiana, including Beaumont, Corpus Christi, Houston and LOOP (Figure 2).

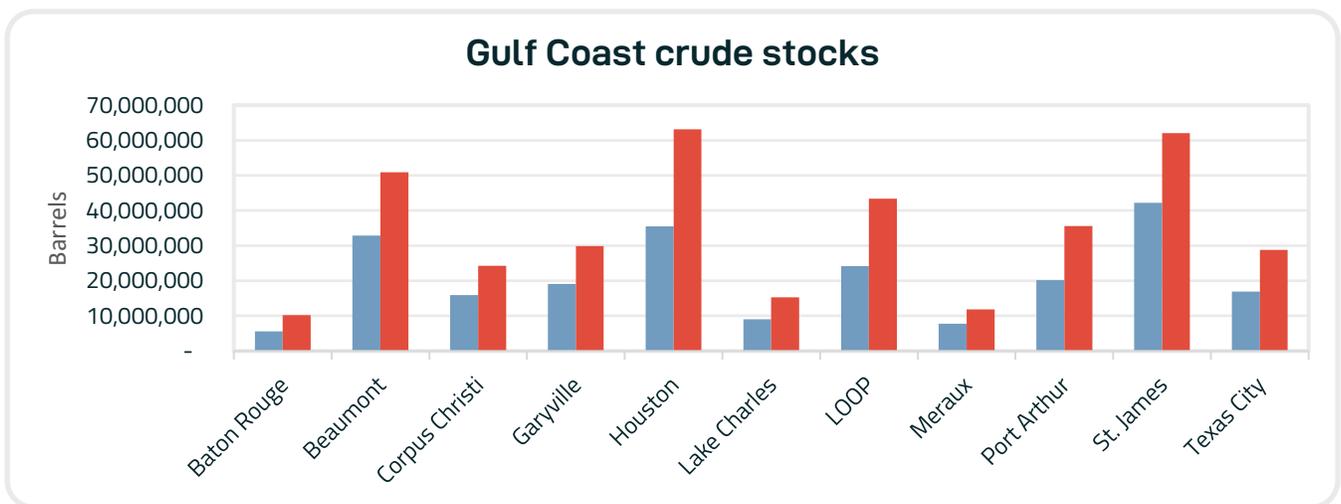


Figure 2 (Source: Ursa)

In Midland, Texas, crude inventories built from late May until mid-November, driven by the pipeline congestion, but have declined since the start-up of the extended Sunrise Pipeline system (Figure 3).

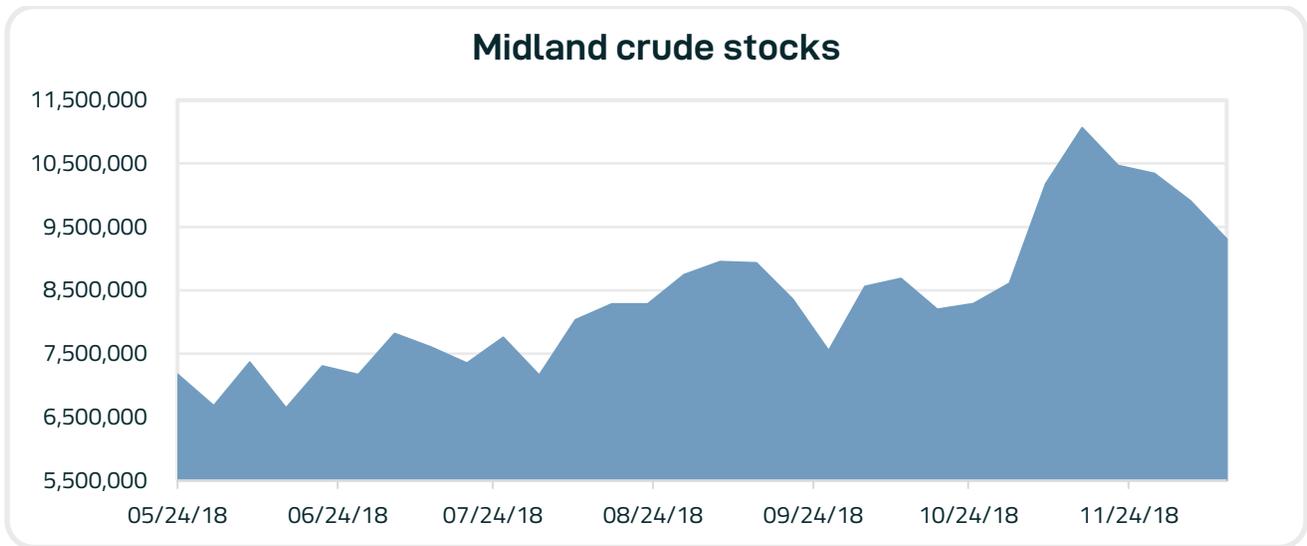


Figure 3 (Source: Ursa)

In all likelihood, Cushing won't be knocked off its perch anytime soon, but will share the stage with the Gulf Coast as pivotal places in the oil pricing universe.



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