Jonty Rushforth, Senior Director, Price Group

The battle for a Gulf crude contract

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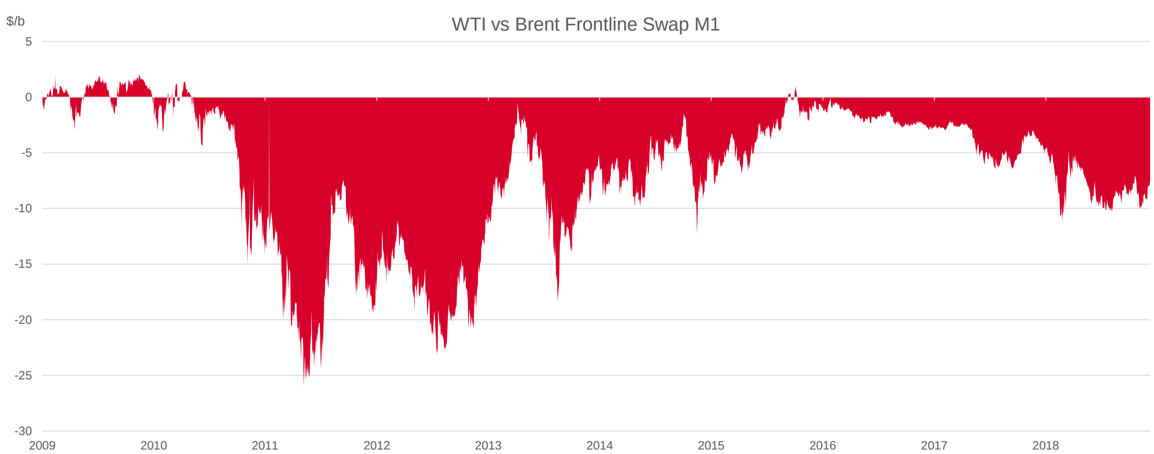
WTI/Brent driven a broader look at US crude pricing



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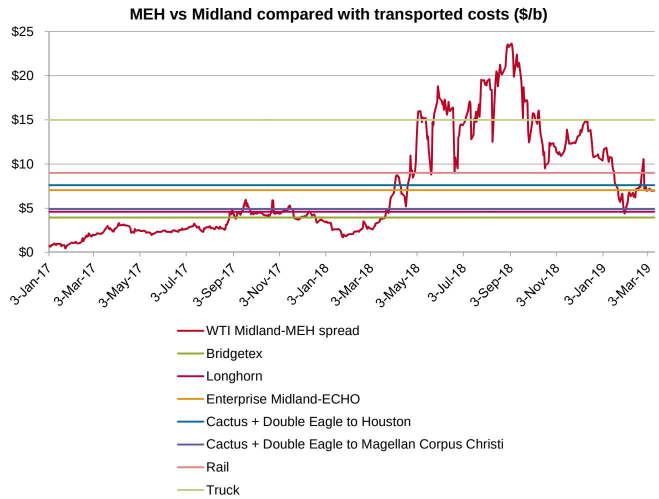
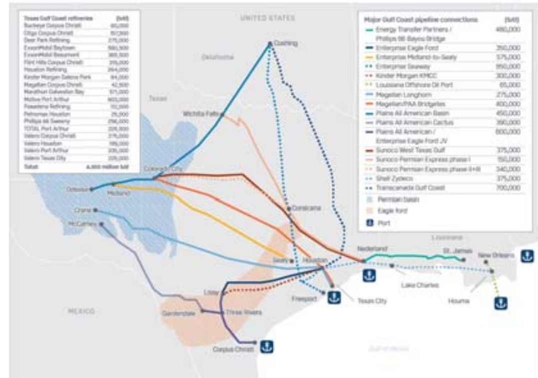
WTI Midland-Houston spread narrows with additional takeaway





Source: S&P Global Platts, Magellan, Enterprise, Plains All American, Kinder Morgan, sources

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Exchanges CME, ICE face off for USGC light sweet crude contract

	CME WTI Cushing	CME WTI Houston	ICE Permian WTI
Contract unit	1,000 barrels	1,000 barrels	1,000 barrels
Listed contracts	“All” (9 years)	Months out to 3CY	96 months
API	37-42	40-44	36-44
Sulfur max	0.42%	0.275%	0.45%
Nickel max	8 ppm	4 ppm	-
Vanadium max	15 ppm	4 ppm	-
Delivery point	Enterprise Products Partners and Enbridge Pipeline terminals: Cushing, Oklahoma	Enterprise Crude Houston (ECHO), Enterprise Houston Ship Channel (EHSC) and Genoa Junction terminals: Greater Houston, Texas area	Magellan East Houston terminal: Houston, Texas

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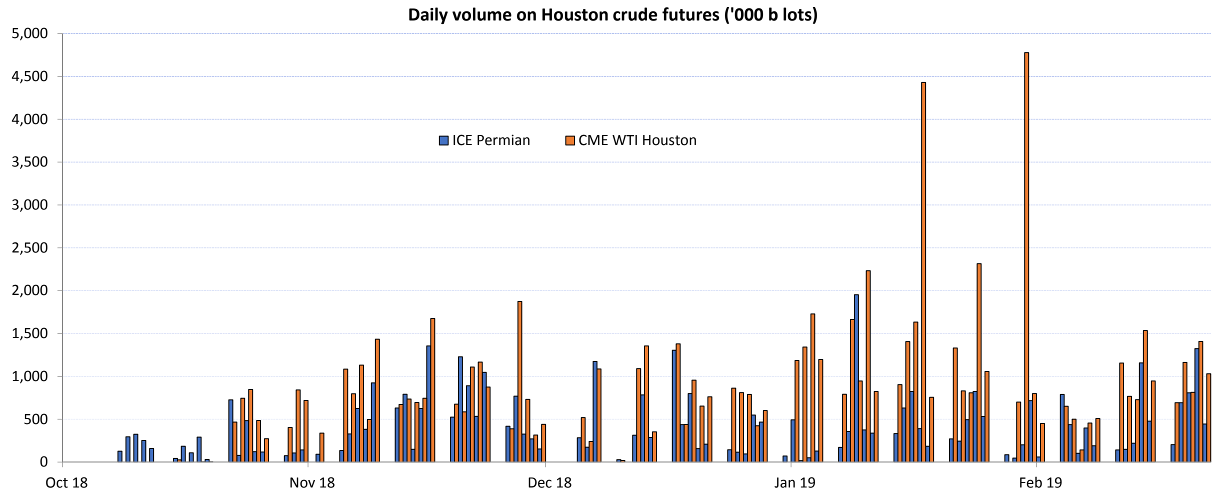
The story so far…



Sources: ICE, CME

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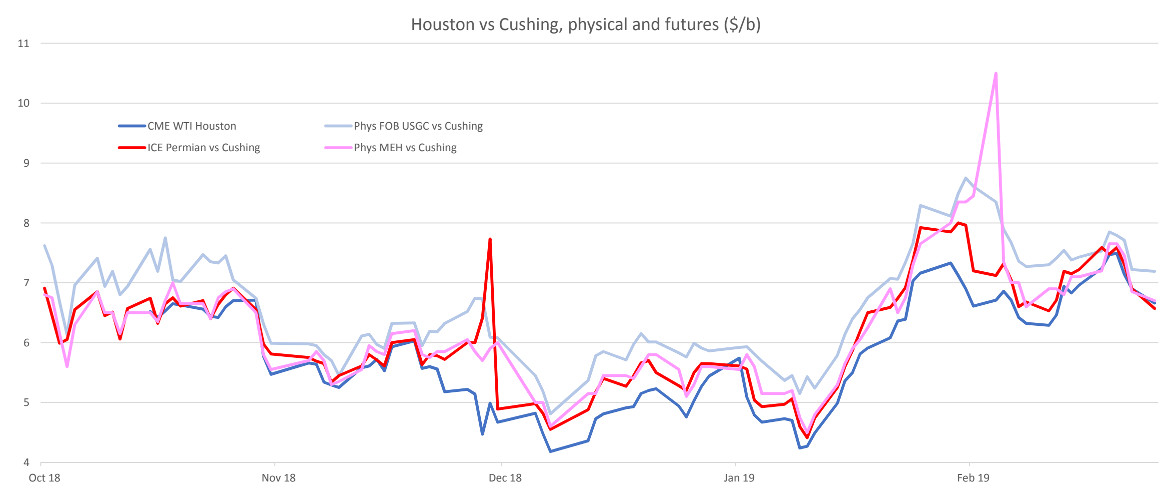
Both contracts in line with observed physical markets



Sources: ICE, CME, Platts

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Permian pipeline build-out to support increased production

PLANNED PERMIAN PIPELINES

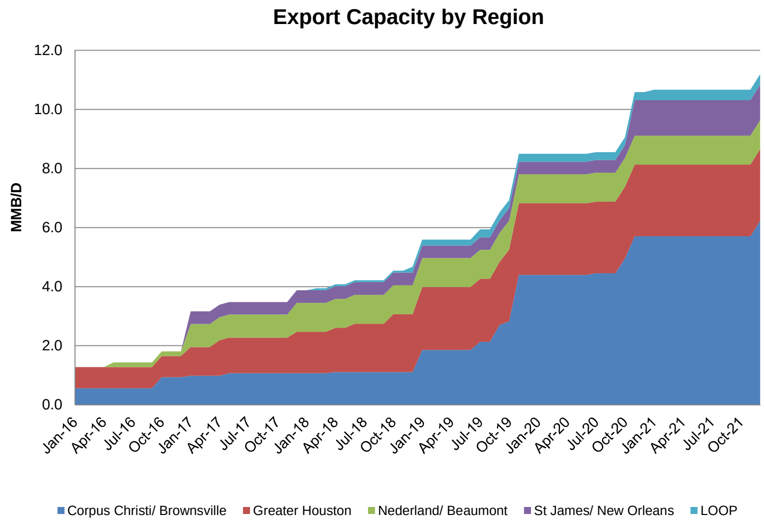
FIRST WAVE

Developer	Name	Capacity (b/d)	Destination	Start up
Phillips 66/Andeavor	Gray Oak	700,000	Corpus Christi, Sweeny/Freeport	Q3-19
EPIC Midstream	EPIC	675,000	Corpus Christi	Q3-19
Plains All American	Cactus II	650,000	Corpus Christi	Q3-19

SECOND WAVE

Developer	Name	Capacity (b/d)	Destination	Start up
Energy Transfer	Midland to Nederland	600,000	Nederland	2020
Jupiter Midstream	Jupiter	500,000	Brownsville	2020
ExxonMobil/Plains		1,000,000	US Gulf Coast	2020 (est.)

Source: S&P Global Platts



Source: S&P Global Platts Analytics

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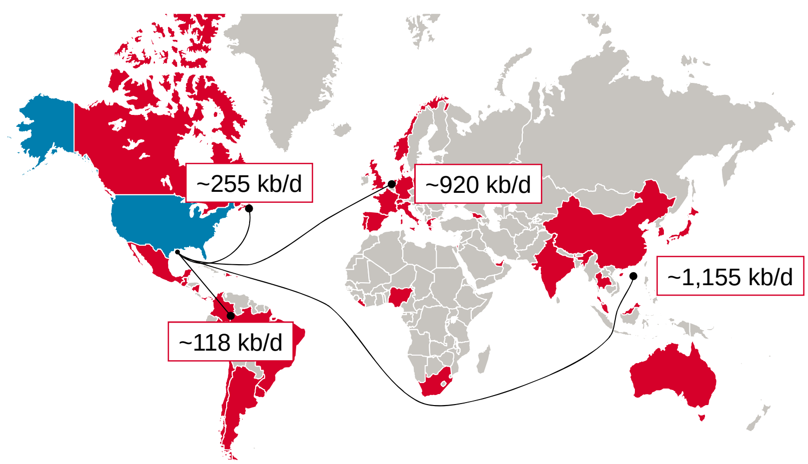
US waterborne crude exports average 2.5 million b/d Q1 2019



Source: S&P Global Platts Analytics

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Valuing US crude exports

- Platts FOB USGC assessments reflect value of export cargoes from across the Gulf rather than a single location, expecting quality to be defined by spec rather than loadpoint
- Separate assessments for WTI, Bakken and Eagle Ford crude and condensate
- FOB prices reflect loadings from ports along the Gulf Coast, including Corpus Christi, Houston, Beaumont, Nederland, Port Arthur
- Methodology based on typical Aframax-sized cargo, reflecting most common export volume, loading 15-45 days forward
- Spot market notably focused more on European destinations at this size and period
- Asia trade tends to be CFR

Source: S&P Global Platts

FOB USGC values complement CFR North Asia, delivered NWE

CFR North Asia at Singapore close

WTI MEH	PCAQH00
LOOP Sour	PCAQI00

Assessed values include freight and other associated costs.

Launched March 2018.

Northwest Europe Delivered at London close

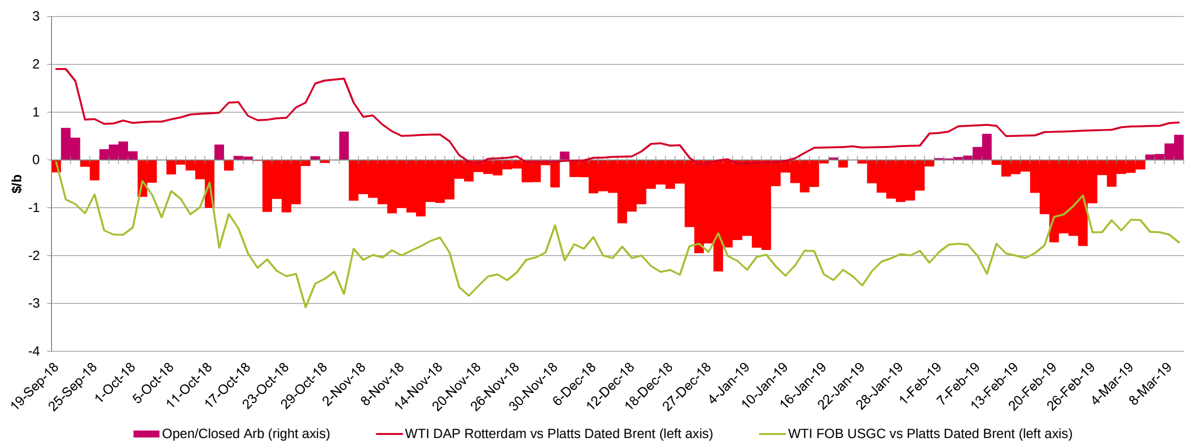
WTI Midland (Basis R'dam)	AWTIC00
WTI Midland (Basis Augusta)	AWTIA00
Eagle Ford 45 (Basis R'dam)	AEFAC00
Eagle Ford 45 (Basis Augusta)	AEFAA00

Priced on DAP basis as differential to 20-60 day forward Dated Brent strip.

Launched September 2018.

Source: S&P Global Platts

Suezmax/day of US crude to Europe despite scarce open spot arb



Source: S&P Global Platts

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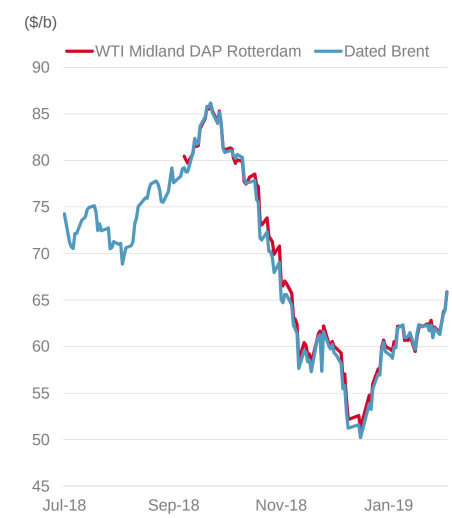
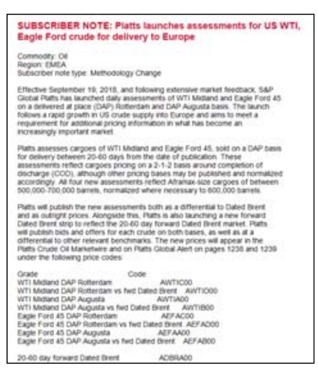
US Gulf Coast crude DAP Europe



Source: S&P Global Platts

- US crude increasingly coming into Europe and beyond
- Eagle Ford 45 and WTI Midland regularly processed in Europe
- Assessment for 20-60 days forward into Rotterdam and Augusta
- Platts assessment reflecting cargoes of 500kb to 700kb



SUBSCRIBER NOTE: Platts launches assessments for US WTI, Eagle Ford crude for delivery to Europe

Commodity: Oil
Region: EMEA
Subscriber note type: Methodology Change

Effective September 19, 2018, and following extensive market feedback, S&P Global Platts has launched daily assessments of WTI Midland and Eagle Ford 45 on a delivered at place (DAP) Rotterdam and DAP Augusta basis. The launch follows a rapid growth in US crude supply into Europe and aims to meet a requirement for additional pricing information in what has become an increasingly important market.

Platts assesses cargoes of WTI Midland and Eagle Ford 45, sold on a DAP basis for delivery between 20-60 days from the date of publication. These assessments reflect cargoes pricing on a 2-1-2 basis around completion of discharge (COD), although other pricing bases may be published and normalized accordingly. All four new assessments reflect Aframax-size cargoes of between 500,000-700,000 barrels, normalized where necessary to 600,000 barrels.

Platts will publish the new assessments both as a differential to Dated Brent and as outright prices. Alongside this, Platts is also launching a new forward Dated Brent strip to reflect the 20-60 day forward Dated Brent market. Platts will publish bids and offers for each crude on both bases, as well as at a differential to other relevant benchmarks. The new prices will appear in the Platts Crude Oil Marketwire and on Platts Global Alert on pages 1238 and 1239 under the following price codes:

Grade	Code
WTI Midland DAP Rotterdam	AWTIC00
WTI Midland DAP Rotterdam vs fwd Dated Brent	AWTID00
WTI Midland DAP Augusta	AWTIA00
WTI Midland DAP Augusta vs fwd Dated Brent	AWTIB00
Eagle Ford 45 DAP Rotterdam	AEFAC00
Eagle Ford 45 DAP Rotterdam vs fwd Dated Brent	AEFAD00
Eagle Ford 45 DAP Augusta	AEFAA00
Eagle Ford 45 DAP Augusta vs fwd Dated Brent	AEFAB00
20-60 day forward Dated Brent	ADBRA00

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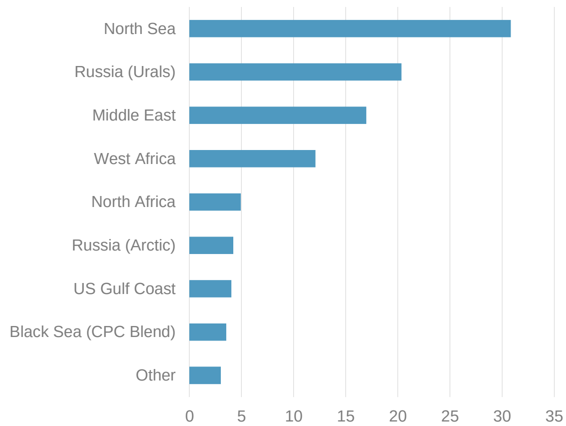
CIF Europe crude values growing in relevance

NWE crude sourcing by region (%)



Source: S&P Global Platts

- Platts CIF methodology gaining more momentum
- US deliveries increasingly part of the European delivered crude market
- Well over half of the Forties loading program moves to the far East each month
- Southwold, Dunbar frequently act as staging grounds for voyages further East
- China is a frequent buyer of Forties and Ekofisk when economics permit

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Platts to reflect CIF Rotterdam offers in Dated Brent from November 2019 loadings

- Platts has confirmed that with effect from October 1, 2019, it will reflect competitive offers for Brent, Forties, Oseberg, Ekofisk and Troll crude oil cargoes on a CIF Rotterdam basis in its Dated Brent crude oil benchmark.
- This step will enable the inclusion of a greater amount of market data in the North Sea's light, sweet crude oil benchmark, and ensure that the grades currently reflected in Dated Brent continue to play the fullest possible role in establishing the value of North Sea crude.
- Offers on a CIF Rotterdam basis for Brent, Forties, Oseberg, Ekofisk and Troll will be considered when evaluating the most competitively available light, sweet crude oil grade in the North Sea. Should a firm CIF Rotterdam offer for any of the five grades currently reflected in the Dated Brent assessment, after adjusting for freight, port fees, and sailing time, be more competitive than a comparable bid for those grades on an FOB basis the CIF Rotterdam offer would take precedence in the final assessment of Dated Brent on the loading dates in question.

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Methodology

- **TIMING OF APPLICATION:** Platts will reflect competitive CIF offers for cargoes loading from November 2019 onwards, which will start to appear in Dated Brent assessments from October 1.
- **FREIGHT ADJUSTMENT FACTOR:** Platts will phase in the level of freight adjustment over the course of three months until it reaches 80%. From October 1, a factor of 40% will be applied to November-loading CIF equivalent cargoes in the Dated Brent assessment, rising to 60% for December-loading cargoes, and 80% for January-loading cargoes onwards. These percentages would be applied to the cargo's freight rate from its respective terminal to Rotterdam and associated port fees. CIF offers for inclusion in this process should be a full 600,000-barrel cargo on an Aframax-sized ship with a tolerance of 1% in the seller's option.
- **CALCULATION OF FREIGHT ADJUSTMENT FACTOR:** Platts will publish a 10-day rolling freight average the day before each day's Market on Close assessment process, to ensure the freight factor is fully known before the assessment process begins. This will be based on its 10 previous assessments of the Dirty Cross-UK/Continent 80,000 mt freight assessment before the date of publication. Platts will apply a freight adjustment factor of the relevant percentage to this 10-day average to adjust CIF Rotterdam offers of each of the five grades in Dated Brent to determine their value. The derived FOB values would be used in determining value versus an FOB bid in the assessment process for each of the five grades in the Dated Brent basket.

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Addition of further grades in Dated Brent assessment

- Platts has consulted widely on the inclusion in the FOB Dated Brent assessment process of other grades beyond the current five in Dated Brent.
- Platts has noted support for other grades to be included in Dated Brent in the future.
- Reflecting competitive CIF Rotterdam offers of Brent, Forties, Oseberg, Ekofisk and Troll crude in Dated Brent is a critical enabling step for future methodology development and potential inclusion of grades from outside of the North Sea, should that become necessary.
- Platts does not have any immediate plans to bring further grades into the North Sea crude oil basket.

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Discussion and questions

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