

Methodology and Specifications Guide

Americas Crude Marker (ACM)

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AMERICAS CRUDE MARKER METHODOLOGY

BACKGROUND

Crude oil prices in the US, determined through traditional mechanisms and methodologies, have been exhibiting unusual movements due to the fact that WTI prices in Cushing, Oklahoma have disconnected for extensive periods from markets elsewhere in the US and the world. This results in erroneous signals and mispricing for refiners, exporters of crude to the US and the trading community. The distortions were extremely severe in 2008 and 2009, resulting in a widespread call for the creation of price discovery mechanisms that would yield indications of market value more attuned with overall market conditions in the US. Platts launched a review process of WTI following ample consultation with the oil industry. Following the review, Platts launched Americas Crude Marker, an assessment designed to provide better and more reflective price indications in the US Gulf Coast, the primary crude and products market in the Americas.

As part of its review process, Platts had been exploring several options in the US to improve crude oil price discovery and, as an example, focused initially on US Gulf sour crude oil Mars. The US market needed a strong benchmark that reflected the quality of oil consumed in the US. Most of the crude consumed, produced, refined and imported in the US is sour and accounts for roughly two-thirds of the throughput. The need for a solution was also spurred by the apparent ongoing inability of West Texas Intermediate prices in Cushing, Oklahoma to fully represent US Gulf Coast sour crude economics. The frequent threat of hurricane activity and the vulnerability of operations and platforms to outage in the US Gulf, however, have shown the exposure created when price is centered on a single stream of crude oil. The analysis therefore resulted in the creation of a mechanism using four streams of crude oil.

Platts launched the Americas Crude Marker (ACM) assessments on March 16, 2009, to reflect tradable sour crude values in the US Gulf Coast. Following a review of the US Gulf Coast pipeline systems, production and ownership of a number of crude streams, Platts concluded that the ACM assessments would be composed of Mars, Southern Green Canyon (SGC), Poseidon and Thunder Horse. These four sour grades are produced offshore US Gulf Coast and are transported via pipeline to US Gulf Coast refineries, where the streams can be delivered readily into an area in Texas/Louisiana with a refining capacity of 6.3 million b/d. The US is currently operating at a rate of about 15 million b/d, implying that the basket of crude could access roughly 42% of the US actual operating capacity.

The combined production of these streams is roughly 835,000 b/d, as of January 2009. Thunder Horse crude oil is of lower sulfur content than the other grades, but Platts believes that it

should be part of the basket and would only play a significant role in times of severe supply distress. This grade acts in a similar manner to the potential check that Ekofisk plays as a component of the Brent-Forties-Oseberg-Ekofisk mechanism (BFOE).

Platts' Americas Crude Marker assessments incorporate the values of those four pipeline sour grades (Mars, Poseidon, SGC, and Thunder Horse), with the assessment reflecting the price of the most competitive grade (i.e. price at the margin). SGC has historically been the most competitive grade, with Mars, Poseidon and Thunder Horse typically trading above SGC on a flat price basis. The methodology enables other grades to operate as relief valves, with those crude oils forming the assessment at times when the most competitive grade is tight or subject to supply constraints. This approach is extremely important, particularly in situations where there could be weather stress in the US Gulf Coast.

As stated, most grades produced, imported, and refined in the US Gulf Coast are medium in API gravity and high in sulfur. The latest assays for the four grades are as follows:

	Sulfur (%)	Gravity (API)
Mars:	2.231	29.18
Thunder Horse:	0.65	33.7
SGC:	2.479	28.40
Poseidon:	1.41	33.17

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The most competitive grade at the margin will under typical circumstances be the grade reflected in the assessment. Under normal market conditions and reflecting current qualities, the most competitive grade has been Southern Green Canyon (SGC). The inclusion of Mars, Poseidon, and Thunder Horse ensures that if there are unusual conditions affecting the price of SGC then the price at the margin for the ACM would be formed by the then most competitive grade. For instance, any supply disruptions offshore Texas (i.e. hurricane, field maintenance) that could potentially lift the price and disconnect the price of the most competitive grade above the rest of the ACM basket would be held in check by the lowest of the remaining four grades. This would relieve the problem that has been evident with WTI where, for example, it was observed that WTI soared above competing and better grades in September 2008, with no mechanism in place to ensure that the price would be representative of broader US trading and refining economics.

This relief valve concept is a critical component of pricing as it prevents unusual conditions from creating a distorting impact on broader economics in the US Gulf Coast. For example, SGC traded at a premium to Mars in September 2006 on declining production volumes, which were attributed to field maintenance and supply from SGC-producing fields delivering into the Poseidon blend pool via the Caesar Pipeline's link to the Poseidon pipeline. As heavier crude was diverted into the Poseidon pool at this time, the quality for SGC improved, also

supporting the grade's value relative to other US pipeline sour crudes. Had the ACM assessment mechanism been in place at that time, the ACM assessment would have been set by Mars rather than SGC.

Note that the assessment is formed by the most competitive grade. Platts does not average the price of Mars, Poseidon, Thunder Horse, and SGC to set its Americas Crude Marker assessment. Platts independently assesses the value of all four crudes, and the most competitive grade at the margin will be the primary element in the price formation of the assessment.

Three grades in the ACM basket – Mars, Poseidon, and Thunder Horse, are produced offshore Louisiana and arrive onshore via pipeline. Mars and Thunder Horse are delivered into Clovelly, Louisiana. Poseidon is delivered into Houma, Louisiana. SGC is produced offshore Texas, and arrives onshore via pipeline at Nederland, Texas. The diversity of the producing locations in the ACM prevents local supply disruptions from distorting the price of the ACM. At the same time, the majority of US Gulf Coast refiners have access to all four of the grades either via pipeline (Mars, Poseidon, SGC and Thunder Horse) or via barge (SGC to Louisiana). The likelihood of weather conditions such as a hurricane impacting or simultaneously shutting down for an extensive period of time all the platforms and all the pipelines appears remote.

Assessment Time: Platts ACM assessments, like all US crude oil assessments, reflect market-on-close (MOC) values at 3:15 PM Eastern Time (ET)

Timing: The timing structure for the ACM mirrors the US domestic pipeline market, and Platts publishes three months of the ACM – first, second, and third month. The spot month for all US domestic pipeline barrels changes on the first business day after the 25th of the calendar month. Note that ACM does not roll with the expiration of the front month of light sweet crude on the New York Mercantile Exchange. ACM is a physical assessment and therefore rolls in line with the physical pipeline calendar.

For example, starting March 16, Platts will publish the ACM for April, May and June. On March 26, Platts will roll the ACM along with the rest of the US domestic market to May as the prompt month.

Basis and Location: The basis for the ACM is comprised of the basis and location for the four grades:

- **Mars:** The assessment reflects barrels for delivery into Clovelly, Louisiana.
- **Poseidon:** The assessment is for barrels delivered to Houma, Louisiana.
- **SGC:** The assessment is for barrels delivered into Nederland, Texas.
- **Thunder Horse:** The assessment is for barrels delivered to Clovelly, Louisiana.

Volume: The minimum volume for ACM basket grades (Mars, Poseidon, SGC, and Thunder Horse) is 25,000 bbl, the same minimum for all US domestic grades.

Quality: The API and sulfur content for Mars, Poseidon, SGC, and Thunder Horse changes on a monthly basis. These changes will be reported in the relevant publication on a retroactive basis. (see above chart for latest assays on the four crudes).

Participation in Market on Close Assessment Process: Any credible market participant willing to participate in the ACM assessment process could submit information at any time during the day and/or request publication of transparent bids and offers in Platts' US crude oil market assessment processes for any of the four grades that comprise the ACM.

Platts will consider bids and offers expressed as flat price or as a differential to an underlying basis in its assessment process for ACM. Any market information reported to Platts on a differential basis will be normalized to a fixed price basis for use in the ACM assessment process. Note that the ACM assessment will be published on a fixed and flat price basis.

For additional information on Platts US crude oil MOC process, please visit the following link:

<http://www.platts.com/Oil/Resources/Methodology%20&%20Specifications/crudeoilandproductsspecs.pdf?S=n>

For additional information on Platts crude oil methodology, please visit the following link:

<http://www.platts.com/Oil/Resources/Methodology%20&%20Specifications/crudeoilspecs.pdf?S=n>