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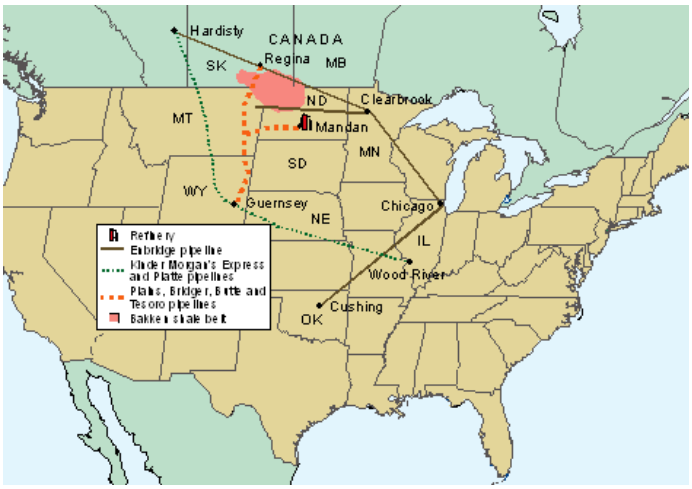
Argus White Paper:
Argus Bakken Crude Assessments

Bakken is one of the most important shale crudes to come to market, and Argus has responded with new coverage of this emerging market. Williston basin production is expected to grow sharply as hydraulic drilling and multi-stage fracturing techniques in the Bakken and Three Forks formations expand the recoverable potential. Current estimates for ultimate recovery from the basin are approximately 9bn bl. Bakken and Three Forks production is now over 315,000 b/d and may increase to 550,000 b/d by 2012. The Williston basin which produces Bakken spreads over areas of US states North Dakota and Montana, and Canadian provinces Saskatchewan and Manitoba (see map).



The slow growth of the Bakken spot market

In spite of this strong production profile, the spot market for Bakken crude has been slow to produce either liquidity or transparency. The crude moves to many different locations via pipeline and rail, and is consumed both in the local region and in far reaching markets like the US Gulf coast. Very little of the crude appears on the spot market. And some of the participants were initially unwilling to provide transparency to the price formation process.

Ever since the Bakken production began to climb, market participants asked Argus to provide an assessment for Bakken crude. Argus was cautious in its approach as spot market transparency was slow to develop. But after a long engagement with industry, Argus achieved a representative cross-section of market participants contributing to the price formation process, including producers and refiners involved in daily spot market trading.

Argus launched coverage of the spot market for Bakken crude in May 2011. The price assessment represents the daily value of light sweet crude oil derived from the Bakken shale formation and neighboring areas, injected into the Enbridge pipeline at Clearbrook, Minnesota. Clearbrook is currently the most liquid market for Bakken crude and approximately 185,000 b/d is changing hands there on a contract basis. Bakken crude at Clearbrook is light sweet crude oil with a typical stream quality of 0.17-0.20% sulfur and 40-42° API gravity. Bakken is also referred to as North Dakota Sweet (NDS) and US High Sweet Clearbrook (UHC). Argus has chosen to formalize around the most commonly used term "Bakken."

Finding the proper structure for a Bakken price

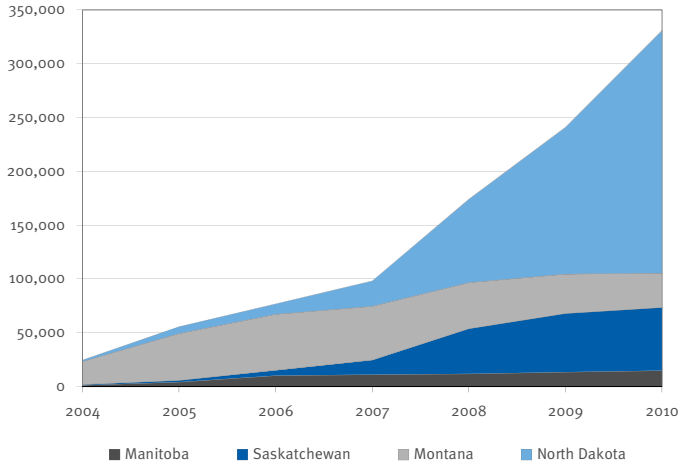
The Argus Bakken price represents the low and high range within which crude traded throughout the trading day, or in the absence of trade, the range within which crude could have traded. No volume-weighted average price will be provided for Bakken. Unlike crude traded in the midcontinent or Gulf coast, Bakken at Clearbrook is traded at a differential to the Canadian method Calendar Month Average (CMA) of front-month Nymex WTI, which excludes weekends and holidays and is based on the Nymex settlement price. Details on the Canadian Calendar month average can be found in our methodology online.

Prices are published as differentials to the Canadian Calendar Month Average (CMA) of Nymex WTI settlement and as fixed prices. Any contracts or swaps would be most accurately based on the mean of the low and high differential.

Argus rolls its Bakken price basis forward on Canadian pipeline nominations day, also called the Notice of Shipment deadline, typically falling around the 20th calendar day of the month. Bakken prices will follow US holiday schedules even though it is traded on the Enbridge pipeline system. The Argus assessment will reflect stream quality at Clearbrook, Minnesota.

The Bakken assessment method put forward by Argus' competition is dramatically different. The differential price is a capture of transactions in a narrow window, an inappropriate method for such an illiquid market. And the CMA basis is calculated using an assessment of Nymex WTI value at 3:15, not the Nymex settlement on which the Trade-at-Settlement (TAS) mechanism is based. The Argus method of capturing trade throughout the trading day has been endorsed by industry and is the reason why Argus is the dominant price index in the US midcontinent and Gulf coast markets.

BAKKEN CRUDE PRODUCTION



The future of Bakken and other shale crude

Argus will continue to monitor levels of liquidity and transparency in other markets where Bakken volumes change hands, such as Guernsey, Wyoming. Should those locations reach robust levels of activity, Argus will move ahead with structuring assessment methodologies appropriate for those markets.

Other new shale crude like Eagle Ford will most likely seek to secure guaranteed demand commitments for production and not rely on a spot market for clearing the supply. As a result, spot markets – and subsequently price indexes – will be slow to emerge. This presents challenges for firms looking for price risk management tools to hedge their growing production, especially those that are finding WTI to be a difficult proxy for light sweet crude.

Companies looking to hedge Eagle Ford may turn to Argus' LLS assessment as a viable pricing mechanism and hedge, as they have done with the volumes of Bakken being shipped to the US Gulf coast by rail. Trade in LLS swaps has been growing steadily since shale crude began reaching refineries along the Gulf coast. Argus will continue to watch these new markets and propose pricing as transparency grows.

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