

DOMESTIC SWEET/ WTI SPECIFICATIONS

FOR COQA- MARCH 2012 IN HOUSTON, TX
PRESENTED BY: DENNIS SUTTON, MARATHON PETROLEUM

The Need for Domestic Sweet Specifications

- Historically, Domestic Sweet was a blend of various sweet crude oil streams from Western Texas, Oklahoma, and surrounding areas.
- Today, with minimal specifications and greater logistical optionality, Domestic Sweet might include high TAN African crudes, condensate from Colorado, Canadian blends, or heavy Brazilian crude.
- Refiners were increasingly concerned about blending of incompatible crudes into the Domestic Sweet stream and the detrimental effect on refinery operations.

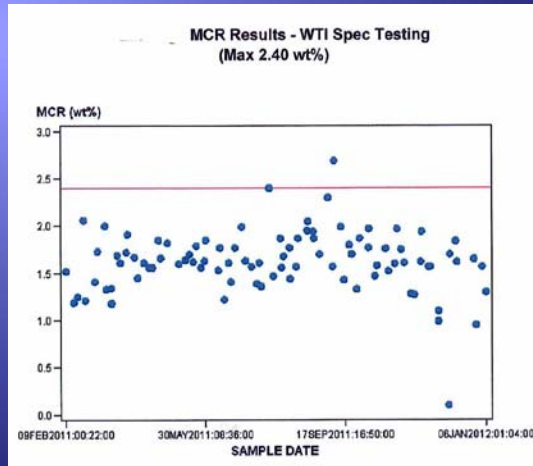
History

- ◆ After years of diligent work and testing, in 2010, the COQA recommended more comprehensive specifications for WTI/Domestic Sweet.
- ◆ Distillation characteristics, acidity (TAN), metals (nickel and vanadium), and carbon residue (MCR) were identified as necessary parameters in addition to the historical specifications of API gravity and sulfur.

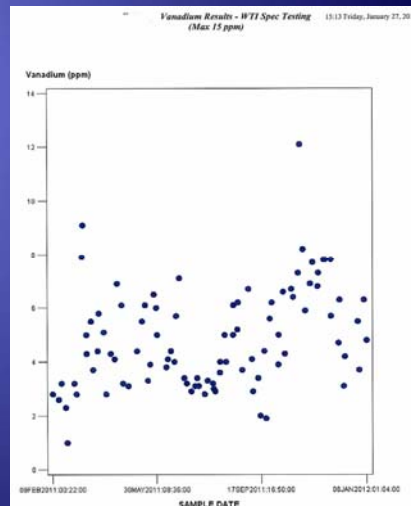
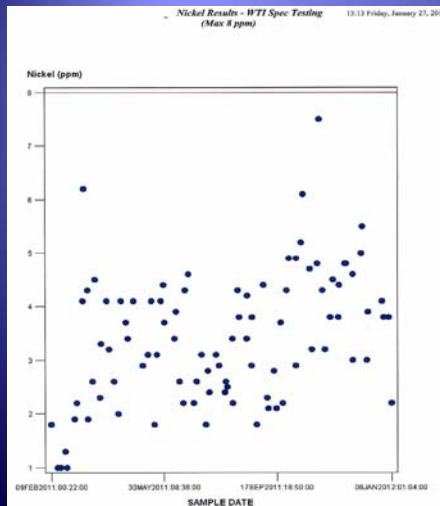
Recommended Specs - Current Status

- ◆ NYMEX met with Cushing personnel in April 2011 to discuss adoption of the additional specs.
- ◆ At the Fall 2011 meeting, Dan Brusstar spoke favorably regarding NYMEX's incorporation of the specs.
- ◆ Plains previously reported the COQA specs are being routinely met.
- ◆ 2011 data for Marathon batches shows the COQA specs are being followed!

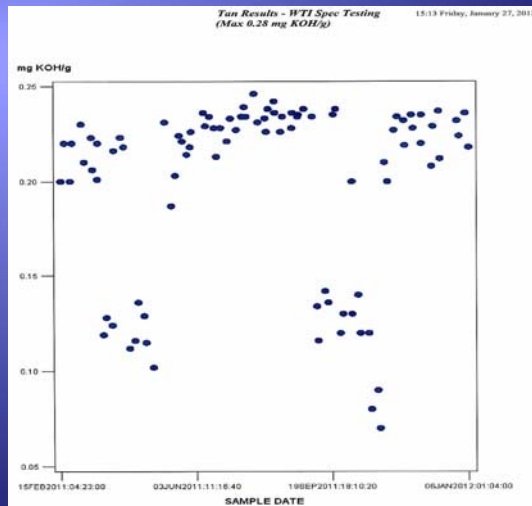
MCR – All samples are less than the 2.40 wt % max spec.



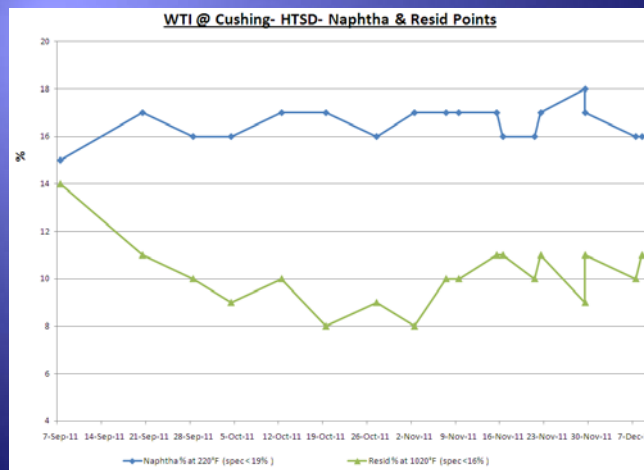
Metals (Ni & V)- All samples are less than the specs.



TAN - All samples are less than the 0.28 max spec.



Yield Data based on HTSD is good.



Conclusions

- ◆ The COQA specs are meaningful to refiners; practical to implement; routinely achievable; and do not limit the liquidity of the stream.
- ◆ Laboratory capabilities are available in Cushing to readily, accurately monitor for the COQA spec parameters.
- ◆ Since COQA's letter 18 months ago, subsequent work has validated this recommendation, showing the perceived hurdles have been overcome.
- ◆ The timing is perfect for NYMEX to formally adopt the COQA specs prior to the movement of WTI to the trading hubs on the Gulf coast.