

BAKER & O'BRIEN
INCORPORATED

U.S. Q1 2015 REFINING MARGINS INCREASE WITH PADD 5 LEADING THE WAY

Special Topic: ULSD Export Growth to Latin America Slowing Down

Houston, May 12, 2015

Baker & O'Brien, Inc.'s 15Q1 release to *PRISM*¹ subscribers reflects an overall strong quarter-to-quarter increase in average U.S. refining margins compared to both the prior quarter and the year-ago quarter. As the adjacent table shows, with the exception of PADD 4, all PADD regions joined in the refining margin increase in successive quarters, with PADD 5 margins exhibiting the largest rise. The increase in margin was driven mainly by stronger gasoline and secondary product crack spreads and lower natural gas costs. This was especially true for West Coast refiners with the ANS 321 crack spread increasing almost \$10/Bbl. from the 4th Quarter 2014 to the 1st Quarter 2015.

PRISM Cash Margins vs. Previous Periods (\$/Bbl.)

| | 15Q1 vs. 14Q4 | 15Q1 vs. 14Q1 |
|---------------------|----------------------|----------------------|
| PADD 1 | 2.08 | 2.70 |
| PADD 2 | 1.25 | -2.53 |
| PADD 3 | 3.76 | 1.89 |
| PADD 4 | -2.60 | -6.19 |
| PADD 5 | 8.86 | 8.56 |
| U.S. Overall | 3.71 | 1.82 |

As shown in the table below, the U.S. Gulf Coast (USGC) LLS 321 crack spread increased by over \$7/Bbl. quarter-to-quarter. The rise in the Chicago WTI 321 crack spread, while lagging

Key Refining Margin Metrics, \$/Bbl.

| | 2015 | 2015 | 2014 | 2014 | 2013 |
|--------------------|-------------|--------------|-------------|---------------|---------------|
| | Mar. | Q1 | Q4 | Annual | Annual |
| WTI | 47.77 | 48.48 | 73.38 | 93.10 | 97.93 |
| LLS | 54.41 | 52.75 | 76.34 | 96.74 | 107.31 |
| Brent | 55.92 | 53.83 | 76.25 | 98.91 | 108.62 |
| LLS – Maya | 8.83 | 8.73 | 9.22 | 11.01 | 9.94 |
| USGC LLS 321* | 16.55 | 13.35 | 6.31 | 12.12 | 10.63 |
| USGC LLS 6321** | 12.35 | 9.99 | 3.57 | 8.05 | 6.92 |
| Chicago WTI 321*** | 24.86 | 17.67 | 15.14 | 19.05 | 22.83 |

*LLS deemed conversion to 67% conventional 87R gasoline and 33% ULSD

**LLS deemed conversion to 50% conventional 87R gasoline, 33% ULSD and 17% Fuel Oil

***WTI deemed conversion to 33% conventional 87R gasoline, 33% RBOB and 33% ULSD

relatively steady LLS-Maya differential—averaging \$8-9/Bbl.—helped support coking refinery margins. Given the recent strength in global crude oil prices, the quarterly average price levels in Q2 might well represent a low point for the year.

the USGC, still reflected an increase of more than \$2/Bbl. Compared to the Q2 2014, WTI's discount to Brent increased by over \$2/Bbl. while USGC refiners saw a comparable widening in the LLS discount to Brent by about \$1/Bbl.

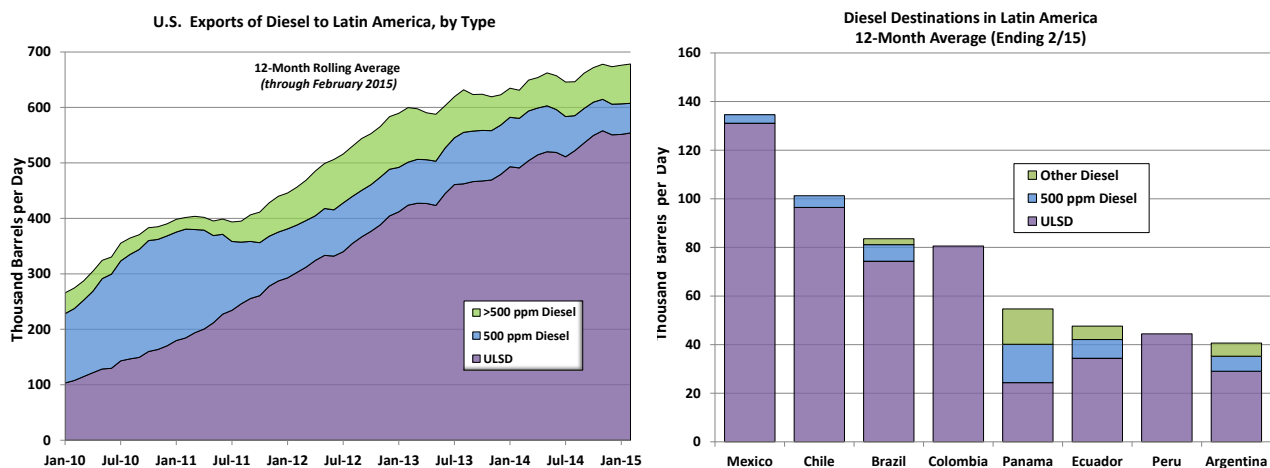
During the quarter, a

¹ *PRISM*TM is Baker & O'Brien's refinery modeling and database system that includes operational and economic performance details for refineries in the U.S., Canada, Europe, and Asia.

Special Topic: ULSD Export Growth to Latin America Slowing Down

Ultra-Low Sulfur Diesel (ULSD), which contains less than 15 parts per million (ppm) continues to be in high demand in Latin America (LA). The region now accounts for over 62% of all ULSD exports from the U.S. over the last 12 months through February 2015. Since 2010, ULSD exports to LA have more than tripled from 170 thousand barrels per day (MB/D) to 554 MB/D currently, an astounding annual average growth rate of about 34%. The thirst for diesel quality has also accelerated with ULSD currently accounting for 79% of all diesel exports, compared to only 48% in 2010.

The graph below, at left, plotted on a 12-month rolling average basis, shows the diesel export trends to LA. Mexico continues to be the top destination for diesel exports (chart at right), followed by Chile, Brazil, and Colombia. Almost all export destinations in Latin America receive primarily ULSD, with the exception of Panama which has continued to receive a greater proportion of lower-quality grades.



Baker & O'Brien expects that growth in LA ULSD exports will begin to moderate and then decline as LA refinery upgrade projects increase ULSD supplies within the region.

About Baker & O'Brien

Baker & O'Brien is an independent professional consulting firm specializing in technology, economics, and management practice for the international oil, gas, chemical, and related industries. With offices in Dallas, Houston, and London, the firm focuses primarily on the downstream industry and assists clients with strategic studies, mergers and acquisitions, and technology evaluations. The firm also provides expert services to support insurance claims, investigate operating incidents, and support a wide range of commercial disputes in the energy industry.

About PRISM

Baker & O'Brien's PRISM software is used to perform detailed analysis of individual refineries and the refining value chain from crude oil load port to products truck rack. The system combines a large historical database with a robust refinery simulator to provide analytical support to competitive assessments, strategic planning, crude oil valuation, and delivered cost of

supply. The *PRISM* database currently includes operational and economic performance details for all refineries in the U.S. and Canada, most refineries in Europe, and over 50 refineries in the Asia Pacific region. The *PRISM* system is available for license and is used in consulting assignments for Baker & O'Brien clients.

Contact: Kevin G. Waguespack
(832) 358-1453
kevin.waguespack@bakerobrien.com