

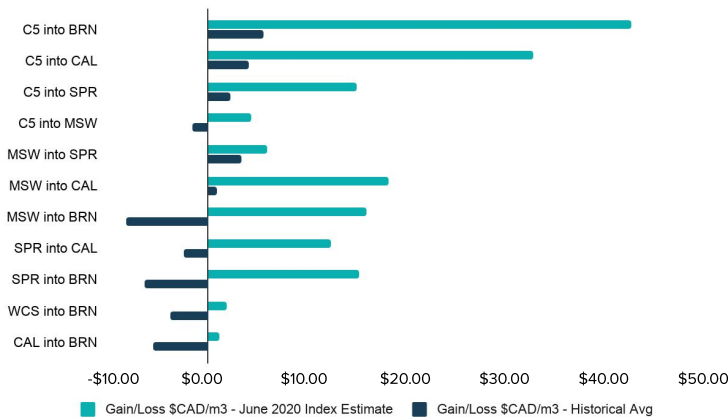
Validere Edge Insights

May 15, 2020

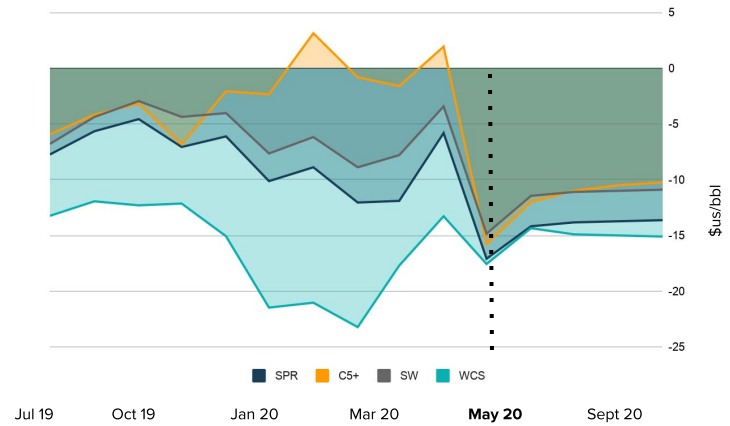
Executive Summary

- Canadian differential spreads have tightened during the recent price downturn and the price of condensate (C5) has become cheap relative to other Canadian grades, particularly heavy grades.
- Historically, blending lighter material into heavier streams came at a cost. The tightening of Canadian differential spreads has led to a price/quality disconnect that has provided an opportunity to move lighter material away from traditional destinations into heavier streams.
- This has created an opportunity for upstream facilities to blend lighter material with heavier crudes to take advantage of the quality equalization process of adding the weighted average differential factor (WADF) of a heavier stream, and subtracting the actual quality (EQ) of a lighter material.

Blending Economics



Canadian Differentials



Blend Grade Qualities

GRADE	DENSITY (kg/m3)	SULPHUR (wt%)	C4 (vol%)	C3- (vol%)	EQ (\$CAD/m3)	WADF (\$CAD/m3)
MSW	820.00	0.40	0.00	0.00	+1.38	(1.27)
C5	740.00	0.10	4.00	1.00	+1.77	(6.63)
SPR	840.00	1.80	0.00	0.00	(25.29)	+9.25
CAL	855.00	1.20	0.00	0.00	(24.36)	+24.66
BRN	925.20	3.10	0.00	0.00	(65.11)	+62.49
WCS	920.70	3.57	0.00	0.00	0.00	0.00

C5 Differential Spreads

