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VALUE NAVIGATOR PRICE FILE - RELEASE NOTES

Enclosed within this .zip are folders for Value Navigator versions 6.5, 6.6 and 2016. Within each folder is one price file that can be imported into the specified version of Value Navigator. This single price file contains all tax, royalty, par/reference pricing, benchmark pricing and exchange rate information relevant to the most recent month end.

These files also contain Alberta Modernized Royalty Framework (MRF) data. These files may be imported into either MRF or pre-MRF versions of the program.

If you encounter any difficulties, please do not hesitate to contact Sproule.

New This Month (2017-12-31):

Changes for this month's release include those made to incorporate updates to pricing, exchange rate assumptions and inflation as of December 31, 2017. Please note that these files now include pricing forecasts needed for the MRF and there are certain assumptions that have been made regarding the MRF pricing forecasts. These assumptions include forecasts of hydrocarbon par pricing for oil, natural gas, natural gas liquids and the C* Capital Cost Index (C* CCI). These values may require updating once the AER releases more clarifying details regarding the MRF calculations.

Price Forecast Adjustment Notice – December 31, 2017

Sproule has adjusted its December 31, 2017 price forecast as outlined below:

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Brent, Canadian Light Sweet (CLS) to WTI Differential, CAD/USD

	UK Brent (USD/BBL)		**CLS – WTI Differential (USD/BBL)**		**CAD/USD Exchange Rate**	
	Nov 30, 2017 Forecast	Dec 31, 2017 Forecast	Nov 30, 2017 Forecast	Dec 31, 2017 Forecast	Nov 30, 2017 Forecast	Dec 31, 2017 Forecast
2018	57.00	58.00	-3.85	-3.30	0.80	0.79

With increased US crude supply and seasonal demand weakness during the first half of the year, Sproule anticipates WTI prices leveling off to $55US/bbl for 2018. Despite additional pipeline capacity from Cushing to the US Gulf Coast expected to come online Q1 2018, we believe Brent will still trade at a premium to WTI and have revised our Brent outlook from $57.00 to $58.00 US/bbl for 2018.

In 2017 we saw a tighter than expected differential between Canadian Light Sweet and WTI. We expect this to hold through the next twelve months. The Canadian Light Sweet differential to WTI has been revised from -$3.85 US/bbl to -$3.30 US/bbl for 2018.

We also revised our outlook for the CAD/USD exchange from 0.80 to 0.79 for 2018 to reflect the Bank of Canada postponing rate hikes that were previously expected sometime in Q4 of 2017.

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Canadian Heavy Oil Differentials

	Canadian Heavy Oil Differentials to WTI (USD/bbl)							
	Koch Heavy		**WCS**		**Bow River Hardisty**		**Cold Lake Blend**	
	Nov 30, 2017 Forecast	Dec 31, 2017 Forecast	Nov 30, 2017 Forecast	Dec 31, 2017 Forecast	Nov 30, 2017 Forecast	Dec 31, 2017 Forecast	Nov 30, 2017 Forecast	Dec 31, 2017 Forecast
2018	-18.43	-18.81	-14.25	-14.67	-14.25	-14.16	-14.77	-16.74
2019	-16.13	-20.40	-12.55	-16.12	-12.03	-14.90	-14.59	-18.56
2020	-18.56	-19.46	-14.29	-14.81	-13.68	-14.14	-16.73	-17.47

We are widening our Canadian Heavy Oil to WTI differentials in 2018 and 2019 driven by increasing heavy oil production from Western Canada and the lack of pipeline infrastructure to export. Producers will rely on rail to transport additional supply to market until projects such as KXL are complete. Long-term, we still see a narrowing of these differentials driven by declining US heavy oil imports from Venezuela and Mexico.

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Henry Hub, AECO to Henry Hub Differential

	Henry Hub (USD/MMBtu)		**AECO – Henry Hub Differential (USD/MMBtu)**		**AECO (CAD/MMBtu)**	
	Nov 30, 2017 Forecast	Dec 31, 2017 Forecast	Nov 30, 2017 Forecast	Dec 31, 2017 Forecast	Nov 30, 2017 Forecast	Dec 31, 2017 Forecast
2018	3.25	3.25	-0.88	-1.00	2.96	2.85
2019	3.50	3.50	-0.82	-0.95	3.27	3.11
2020	4.00	4.00	-0.77	-0.90	3.81	3.65
2021	4.08	4.08	-0.68	-0.85	4.00	3.80
2022	4.16	4.16	-0.68	-0.80	4.10	3.95

Sproule maintains Henry Hub will reach $4.00US/MMBtu by 2020 due to increased demand for US gas from Mexico and US Gulf Coast LNG exports. However, we are revising our outlook for AECO gas down from our previous month's forecast. We expect the US can meet their increasing demand largely by themselves, so without our own LNG projects, Canadian gas will continue to be last to market. Our outlook for the AECO to Henry Hub differential reflects this, starting at -$1.00US/MMBtu in 2018 and reducing to -$0.80US/MMBtu by 2022.

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