



**PRODUCT PRICE AND MARKET FORECASTS  
FOR THE GLOBAL OIL AND GAS INDUSTRY**

**January 1, 2015**

Prepared by  
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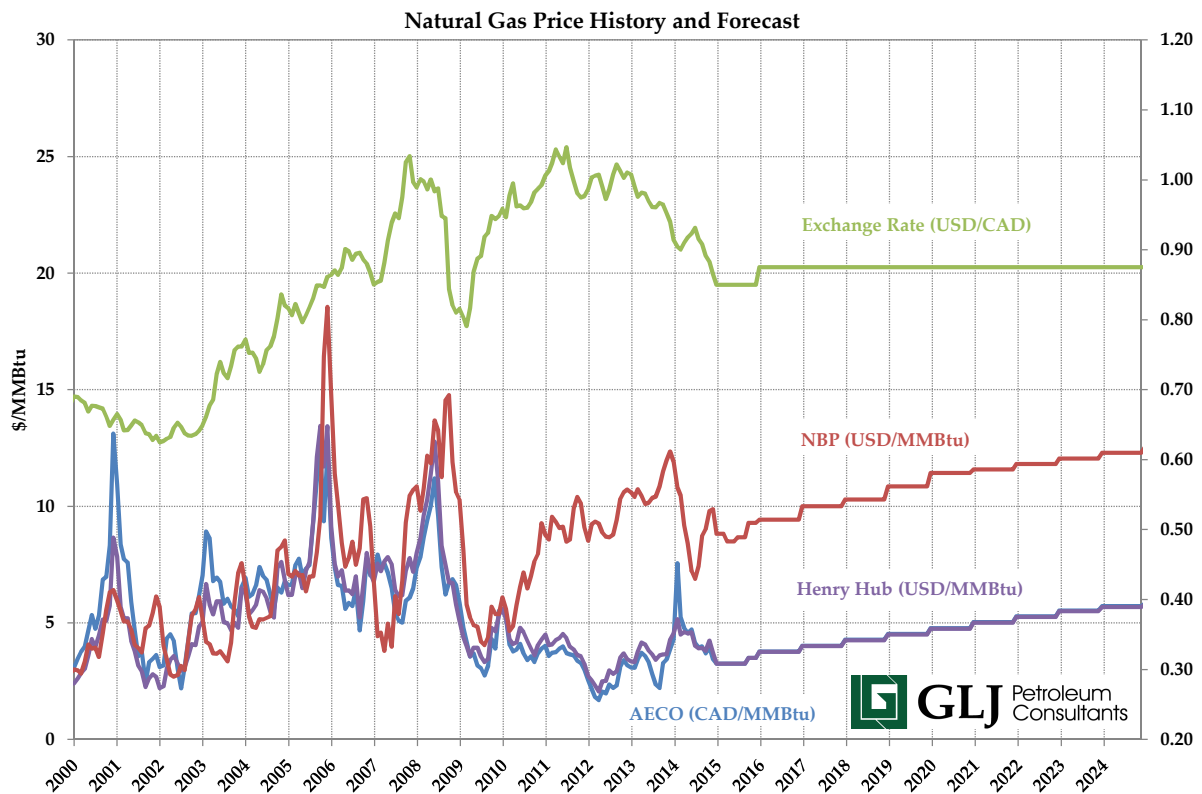
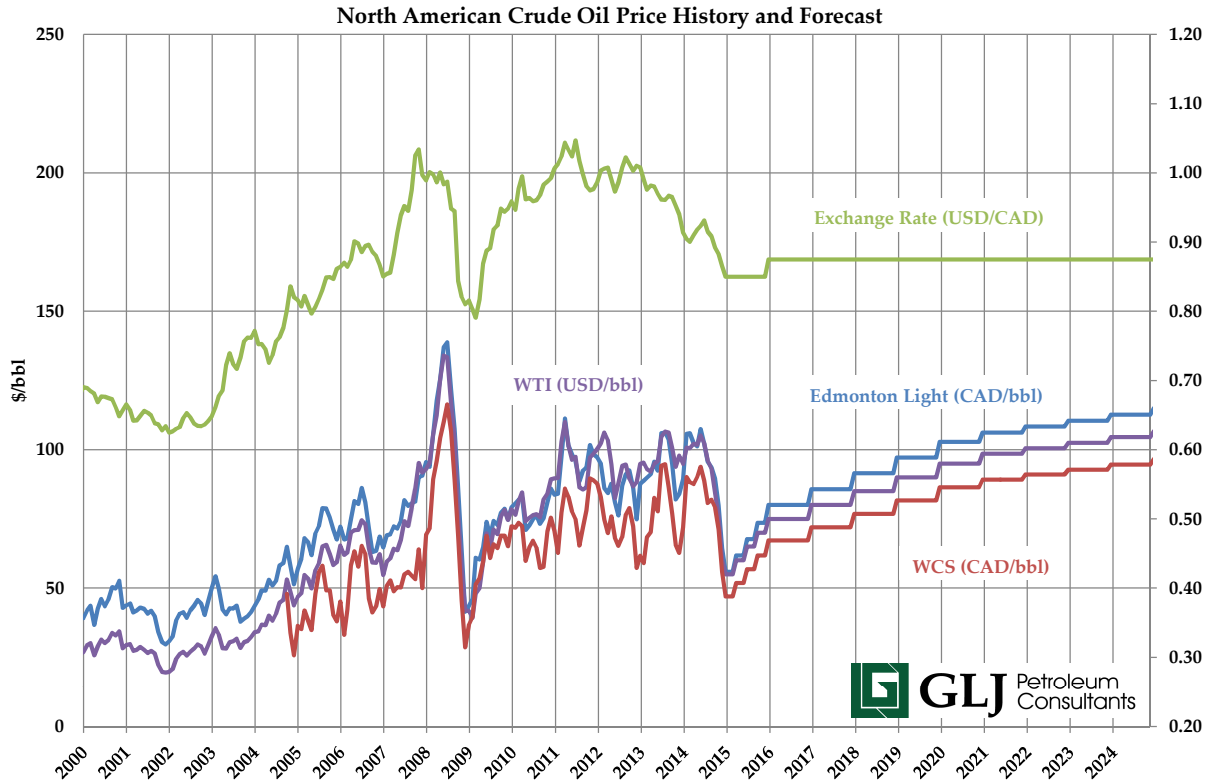
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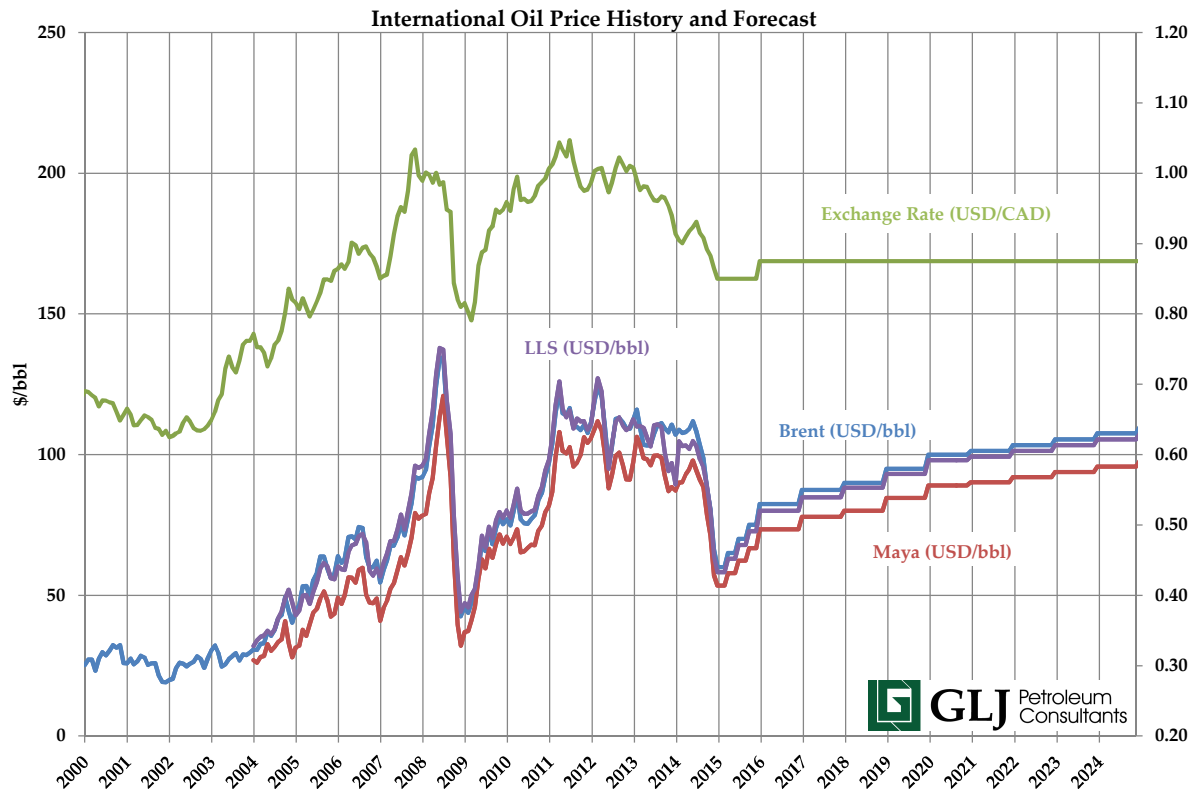
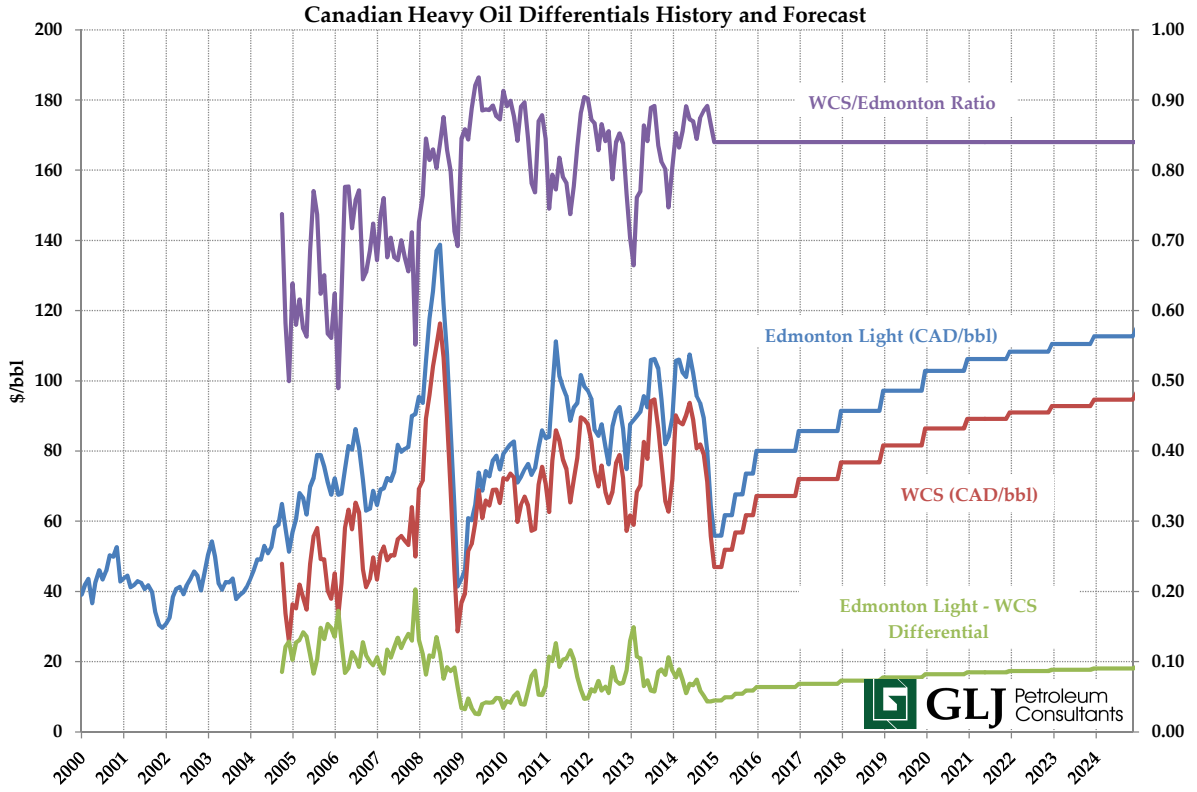
## January 1, 2015

GLJ Petroleum Consultants has prepared the enclosed price and market forecasts after a comprehensive review of information available through to December 2014. Information sources include numerous government agencies, industry publications, oil refiners and natural gas marketers. The accuracy of all factual data, from all sources has been accepted as represented without detailed investigation by GLJ Petroleum Consultants. The forecasts presented herein are based on an informed interpretation of currently available data. While they are considered reasonable at this time, users of these forecasts should understand the inherent high uncertainty in forecasting any commodity or market. These forecasts will be revised periodically as market, economic and political conditions change. These future revisions may be significant.

**GLJ PETROLEUM CONSULTANTS  
 PRODUCT PRICE AND MARKET FORECASTS  
 FOR THE GLOBAL OIL AND GAS INDUSTRY  
 January 1, 2015**

GLJ Petroleum Consultants has completed our commodity price forecasts as presented in the attachments. Revisions in the forecasts reflective of current market conditions have been incorporated. Widely followed benchmarks are presented graphically below:





**Table 1**  
**GLJ Petroleum Consultants Ltd.**  
**Crude Oil and Natural Gas Liquids**  
**Price Forecast**  
 Effective January 1, 2015

Year	Inflation %	Bank of Canada Average Noon Exchange Rate USD/CAD	NYMEX WTI Near Month Futures Contract Crude Oil at Cushing Oklahoma		ICE Brent Near Month Futures Contract Crude Oil FOB North Sea	Light Sweet Crude Oil (40 API, 0.3%S) at Edmonton	Bow River Crude Oil Stream Quality at Hardisty	WCS Stream Quality at Hardisty	Heavy Crude Oil Proxy (12 API) at Hardisty	Light Crude Oil (35 API, 1.2%S) at Cromer	Medium Crude Oil (29 API, 2.0%S) at Cromer	Alberta Natural Gas Liquids (Then Current Dollars)			
			Constant 2015 \$ USD/bbl	Then Current USD/bbl	Then Current USD/bbl	Then Current CAD/bbl	Then Current CAD/bbl	Then Current CAD/bbl	Then Current CAD/bbl	Then Current CAD/bbl	Then Current CAD/bbl	Then Current CAD/bbl	Spec Ethane CAD/bbl	Edmonton Propane CAD/bbl	Edmonton Butane CAD/bbl
2005	2.2	0.826	67.83	56.58	55.14	69.02	44.73	43.74	34.07	62.18	56.77	N/A	43.04	51.80	69.57
2006	2.0	0.882	77.64	66.22	66.16	73.21	51.82	50.66	41.84	66.38	62.26	N/A	43.85	60.17	75.41
2007	2.2	0.935	83.22	72.39	72.71	77.06	53.64	52.38	43.42	71.13	65.71	N/A	49.56	61.78	77.38
2008	2.4	0.943	112.14	99.64	98.30	102.89	84.31	82.95	74.94	96.08	93.10	N/A	58.38	75.33	104.78
2009	0.4	0.880	67.86	61.78	62.50	66.32	60.18	58.66	54.46	63.84	62.96	N/A	38.03	48.17	68.17
2010	1.8	0.971	87.01	79.52	80.25	77.87	68.45	67.27	60.76	76.58	73.76	N/A	46.84	65.91	84.27
2011	2.9	1.012	102.28	95.12	110.86	95.53	78.58	77.14	67.64	92.35	88.33	N/A	53.66	74.42	104.17
2012	1.5	1.001	98.42	94.21	111.71	86.60	74.42	73.13	63.64	84.51	81.38	N/A	29.04	66.70	100.84
2013	0.9	0.971	100.82	97.96	108.77	93.47	76.33	75.01	65.11	92.30	88.13	N/A	38.88	68.81	104.70
2014 (e)	2.0	0.905	94.87	93.06	99.89	94.77	82.08	81.62	74.23	92.87	89.86	N/A	45.57	69.29	102.92
2015 Q1	2.0	0.850	55.00	55.00	60.00	55.88	47.50	46.94	42.09	54.76	53.09	10.50	13.97	47.50	59.79
2015 Q2	2.0	0.850	60.00	60.00	65.00	61.76	52.50	51.88	46.62	60.53	58.68	10.50	18.53	51.26	66.09
2015 Q3	2.0	0.850	65.00	65.00	70.00	67.65	57.50	56.82	51.16	66.29	64.26	10.50	20.29	54.79	72.38
2015 Q4	2.0	0.850	70.00	70.00	75.00	73.53	62.50	61.76	55.69	72.06	69.85	11.36	25.74	58.09	78.68
2015 Full Year	2.0	0.850	62.50	62.50	67.50	64.71	55.00	54.35	48.89	63.41	61.47	10.72	19.63	52.91	69.24
2016	2.0	0.875	73.53	75.00	82.50	80.00	68.00	67.20	60.68	78.40	76.00	12.30	32.00	60.80	85.60
2017	2.0	0.875	76.89	80.00	87.50	85.71	72.86	72.00	65.09	84.00	81.43	13.16	38.57	65.14	91.71
2018	2.0	0.875	80.10	85.00	90.00	91.43	77.71	76.80	69.49	89.60	86.86	14.03	41.14	69.49	97.83
2019	2.0	0.875	83.15	90.00	95.00	97.14	82.57	81.60	73.90	95.20	92.29	14.90	43.71	73.83	103.94
2020	2.0	0.875	86.04	95.00	100.00	102.86	87.43	86.40	78.30	100.80	97.71	15.76	46.29	78.17	110.06
2021	2.0	0.875	87.50	98.54	101.35	106.18	90.26	89.19	80.87	104.06	100.87	16.63	47.78	80.70	113.62
2022	2.0	0.875	87.50	100.51	103.38	108.31	92.06	90.98	82.51	106.14	102.89	17.49	48.74	82.31	115.89
2023	2.0	0.875	87.50	102.52	105.45	110.47	93.90	92.79	84.17	108.26	104.95	18.36	49.71	83.96	118.20
2024	2.0	0.875	87.50	104.57	107.56	112.67	95.77	94.65	85.87	110.42	107.04	18.98	50.70	85.63	120.56
2025+	2.0	0.875	87.50	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr

Historical futures contract price is an average of the daily settlement price of the near month contract over the calendar month.

Revised 2014-12-31

**Table 2**  
**GLJ Petroleum Consultants Ltd.**  
**Natural Gas and Sulphur**  
**Price Forecast**  
 Effective January 1, 2015

Year	NYMEX Henry Hub		Midwest	Alberta Plant Gate					Saskatchewan Plant Gate			British Columbia			Alberta
	Near Month	Contract	Price @ Chicago	AECO/NIT Spot	Spot		ARP	Alliance	SaskEnergy	Spot	Sumas Spot	Westcoast	Spot	Sulphur FOB Vancouver	Sulphur at Plant Gate
	Constant	Then	Then	Then	Constant	Then						Station 2	Plant Gate		
	2015 \$	Current	Current	Current	2015 \$	Current	CAD/MMBtu	CAD/MMBtu	CAD/MMBtu	CAD/MMBtu	USD/MMBtu	CAD/MMBtu	CAD/MMBtu	USD/lt	CAD/lt
USD/MMBtu	USD/MMBtu	USD/MMBtu	CAD/MMBtu	CAD/MMBtu	CAD/MMBtu	CAD/MMBtu	CAD/MMBtu	CAD/MMBtu	CAD/MMBtu	USD/MMBtu	CAD/MMBtu	CAD/MMBtu	USD/lt	CAD/lt	
2005	10.78	9.00	8.24	8.73	10.16	8.48	8.30	8.28	8.36	8.64	7.45	8.22	8.04	63.50	33.77
2006	8.19	6.99	6.93	6.52	7.38	6.29	6.57	6.37	6.67	6.42	6.04	6.58	6.40	55.07	19.27
2007	8.18	7.12	6.83	6.45	7.16	6.23	6.20	5.87	6.18	6.35	6.52	6.40	6.16	81.66	42.03
2008	10.01	8.90	8.91	8.16	8.93	7.94	7.88	7.83	8.07	8.04	6.47	8.21	7.99	497.39	488.64
2009	4.58	4.16	4.05	3.99	4.17	3.79	3.85	3.24	3.87	3.83	3.80	3.90	3.70	57.06	24.57
2010	4.81	4.40	4.53	4.01	4.14	3.78	3.77	3.31	3.96	3.85	4.13	3.78	3.63	88.94	48.26
2011	4.33	4.03	4.21	3.62	3.68	3.42	3.46	2.84	3.57	3.58	3.90	3.33	3.18	217.16	171.93
2012	2.95	2.83	2.92	2.40	2.31	2.21	2.25	1.65	2.31	2.26	2.70	2.30	2.12	201.03	157.91
2013	3.83	3.72	3.81	3.18	3.04	2.96	2.98	2.60	3.09	3.10	3.71	3.14	2.94	105.74	74.02
2014 (e)	4.38	4.29	5.36	4.52	4.36	4.28	4.17	4.51	4.38	4.44	4.39	4.31	4.07	145.41	110.43
2015 Q1	3.25	3.25	3.45	3.25	3.02	3.02	3.02	2.61	3.12	3.17	3.50	3.20	3.01	150.00	126.47
2015 Q2	3.25	3.25	3.30	3.25	3.02	3.02	3.02	2.43	3.12	3.17	3.00	3.05	2.86	150.00	126.47
2015 Q3	3.25	3.25	3.30	3.25	3.02	3.02	3.02	2.43	3.12	3.17	3.00	3.00	2.81	150.00	126.47
2015 Q4	3.50	3.50	3.60	3.50	3.26	3.26	3.26	2.77	3.37	3.42	3.55	3.40	3.21	150.00	126.47
2015 Full Year	3.31	3.31	3.41	3.31	3.08	3.08	3.08	2.56	3.18	3.23	3.26	3.16	2.97	150.00	126.47
2016	3.68	3.75	3.85	3.77	3.46	3.53	3.53	2.96	3.63	3.69	3.70	3.62	3.43	125.00	92.86
2017	3.84	4.00	4.10	4.02	3.64	3.78	3.78	3.23	3.88	3.94	3.95	3.87	3.68	125.00	92.86
2018	4.00	4.25	4.35	4.27	3.80	4.03	4.03	3.51	4.13	4.19	4.20	4.12	3.93	127.50	95.71
2019	4.16	4.50	4.60	4.53	3.95	4.28	4.28	3.78	4.38	4.45	4.45	4.38	4.18	130.05	98.63
2020	4.30	4.75	4.85	4.78	4.10	4.53	4.53	4.05	4.63	4.70	4.70	4.63	4.42	132.65	101.60
2021	4.44	5.00	5.10	5.03	4.24	4.78	4.78	4.33	4.88	4.95	4.95	4.88	4.67	135.30	104.63
2022	4.57	5.25	5.35	5.28	4.38	5.03	5.03	4.60	5.13	5.20	5.20	5.13	4.92	138.01	107.73
2023	4.69	5.50	5.60	5.53	4.50	5.28	5.28	4.87	5.38	5.45	5.45	5.38	5.17	140.77	110.88
2024	4.75	5.68	5.78	5.71	4.56	5.46	5.46	5.07	5.56	5.63	5.63	5.56	5.35	143.59	114.10
2025+	4.75	+2.0%/yr	+2.0%/yr	+2.0%/yr	4.56	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr

Unless otherwise stated, the gas price reference point is the receipt point on the applicable provincial gas transmission system known as the plant gate.

The plant gate price represents the price before raw gas gathering and processing charges are deducted.

AECO/NIT Spot refers to the same-day spot price averaged over the period.

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**Table 3**  
**GLJ Petroleum Consultants Ltd.**  
**International and Frontier**  
**Price Forecast**  
 Effective January 1, 2015

Year	Inflation %	Bank of Canada Average Noon Exchange Rates			NYMEX WTI Near Crude Oil at Cushing Oklahoma		Light Louisiana Sweet Crude Oil		Mexican Mayan Crude Oil		Brent Blend Crude Oil FOB North Sea		Henry Hub Spot		Nova Scotia Goldboro		National Balancing Point (UK)		
		USD/CAD	CAD/GBP	CAD/EUR	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then
		Current	Current	Current	Current	Current	Current	Current	Current	Current	Current	Current	Current	Current	Current	Current	Current	Current	Current
2005	2.2	0.826	2.206	1.452	56.58	68.42	52.81	63.85	41.66	50.36	55.14	66.69	9.00	10.83	8.19	9.87	7.51	9.02	
2006	2.0	0.882	2.090	1.369	66.22	75.08	63.89	72.41	52.16	59.13	66.16	75.01	6.99	7.94	6.20	7.04	8.34	9.48	
2007	2.2	0.935	2.148	1.436	72.39	76.89	75.36	80.13	59.69	63.30	72.71	77.33	7.12	7.65	6.33	6.84	6.14	6.44	
2008	2.4	0.943	1.961	1.548	99.64	104.27	102.31	107.04	83.90	87.62	98.30	102.81	8.90	9.36	8.32	8.77	11.41	12.12	
2009	0.4	0.880	1.780	1.585	61.78	69.57	64.31	72.52	56.46	63.55	62.50	70.47	4.16	4.75	3.35	3.87	4.95	5.68	
2010	1.8	0.971	1.593	1.367	79.52	81.85	82.78	85.20	70.29	72.35	80.25	82.58	4.40	4.53	3.83	3.96	6.39	6.58	
2011	2.9	1.012	1.586	1.376	95.12	94.02	112.33	111.03	98.60	97.52	110.86	109.57	4.03	3.98	3.62	3.58	9.35	9.25	
2012	1.5	1.001	1.584	1.285	94.21	94.11	111.77	111.62	99.60	99.50	111.71	111.57	2.83	2.82	2.72	2.72	9.38	9.37	
2013	0.9	0.971	1.612	1.369	97.96	100.95	106.19	109.32	97.26	100.13	108.77	112.04	3.72	3.84	5.78	5.94	10.50	10.82	
2014 (e)	2.0	0.905	1.819	1.467	93.06	102.58	94.75	104.47	86.16	94.97	99.89	110.11	4.29	4.74	7.07	7.81	8.26	9.14	
2015 Q1	2.0	0.850	1.800	1.450	55.00	64.71	58.20	68.47	53.40	62.82	60.00	70.59	3.25	3.82	11.92	14.02	7.50	8.82	
2015 Q2	2.0	0.850	1.800	1.450	60.00	70.59	63.05	74.18	57.85	68.06	65.00	76.47	3.25	3.82	2.56	3.01	7.22	8.50	
2015 Q3	2.0	0.850	1.800	1.450	65.00	76.47	67.90	79.88	62.30	73.29	70.00	82.35	3.25	3.82	2.56	3.01	7.37	8.67	
2015 Q4	2.0	0.850	1.800	1.450	70.00	82.35	72.75	85.59	66.75	78.53	75.00	88.24	3.50	4.12	5.27	6.20	7.89	9.29	
2015 Full Year	2.0	0.850	1.800	1.450	62.50	73.53	65.48	77.03	60.08	70.68	67.50	79.41	3.31	3.90	5.58	6.56	7.50	8.82	
2016	2.0	0.875	1.800	1.450	75.00	85.71	80.02	91.46	73.43	83.91	82.50	94.29	3.75	4.29	5.52	6.30	8.25	9.43	
2017	2.0	0.875	1.800	1.450	80.00	91.43	84.88	97.00	77.88	89.00	87.50	100.00	4.00	4.57	5.27	6.02	8.75	10.00	
2018	2.0	0.875	1.800	1.450	85.00	97.14	88.20	100.80	80.10	91.54	90.00	102.86	4.25	4.86	4.28	4.90	9.00	10.29	
2019	2.0	0.875	1.800	1.450	90.00	102.86	93.10	106.40	84.55	96.63	95.00	108.57	4.50	5.14	4.53	5.18	9.50	10.86	
2020	2.0	0.875	1.800	1.450	95.00	108.57	98.00	112.00	89.00	101.71	100.00	114.29	4.75	5.43	4.78	5.46	10.00	11.43	
2021	2.0	0.875	1.800	1.450	98.54	112.62	99.32	113.51	90.20	103.09	101.35	115.83	5.00	5.71	5.02	5.74	10.14	11.58	
2022	2.0	0.875	1.800	1.450	100.51	114.87	101.31	115.79	92.01	105.15	103.38	118.15	5.25	6.00	5.27	6.02	10.34	11.81	
2023	2.0	0.875	1.800	1.450	102.52	117.17	103.34	118.10	93.85	107.26	105.45	120.51	5.50	6.29	5.52	6.30	10.54	12.05	
2024	2.0	0.875	1.800	1.450	104.57	119.51	105.41	120.47	95.73	109.40	107.56	122.93	5.68	6.49	5.69	6.51	10.76	12.29	
2025+	2.0	0.875	1.800	1.450	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	

Historical futures contract price is an average of the daily settlement price of the near month contract over the calendar month.

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