



# TRIMBLE ENGINEERING ASSOCIATES LTD.

## PRODUCT PRICE FORECAST Including Operating and Capital Cost Escalation Factors (9) Effective JANUARY 1, 2019

YEAR	Exchange Rate US\$/ CDN\$	OIL (1)						GAS (7)			Cond. (1) CDN\$/ bbl	But. (8) CDN\$/ bbl	Prop. (8) CDN\$/ bbl	Sulph. (8) CDN\$/ lt
		WTI @ Cushing US\$/ bbl	Edmonton Light (2) CDN\$/ bbl	Hardisty Bow Riv (3) CDN\$/ bbl	WCS (4) CDN\$/ bbl	Hardisty Heavy (5) CDN\$/ bbl	Cromer LSB (6) CDN\$/ bbl	Henry Hub US\$/ MMbtu	AECO Spot CDN\$/ MMbtu	B.C. Spot CDN\$/ MMbtu				
2007 Actual	0.94	72.33	77.77	53.87	N/A	44.72	72.52	6.86	6.61	6.12	77.30	63.47	49.60	38.02
2008 Actual	0.94	99.59	103.26	83.90	N/A	76.35	97.27	9.02	8.13	8.12	104.70	75.09	58.64	303.85
2009 Actual	0.88	61.63	66.75	59.80	59.80	55.65	65.11	4.21	4.14	4.05	68.38	47.67	38.29	14.97
2010 Actual	0.97	79.43	78.04	68.18	68.18	62.30	76.82	4.49	4.13	3.93	84.21	68.15	46.62	43.02
2011 Actual	1.01	95.00	95.69	78.42	77.12	69.09	92.37	4.28	3.68	3.37	104.12	77.43	58.75	106.41
2012 Actual	1.00	94.19	86.76	74.41	73.10	65.00	84.53	2.81	2.40	2.37	100.76	75.52	30.83	97.47
2013 Actual	0.97	97.98	93.43	76.29	72.55	65.48	91.76	3.65	3.16	3.12	104.84	76.69	34.84	61.46
2014 Actual	0.91	93.00	94.84	81.46	82.17	75.96	92.88	4.31	4.42	4.18	102.33	59.47	42.98	84.23
2015 Actual	0.78	48.80	56.31	44.88	44.16	41.93	55.14	2.77	2.77	1.95	61.45	33.73	5.35	104.24
2016 Actual	0.76	43.32	51.97	38.26	38.18	33.33	51.36	2.41	2.09	1.71	55.71	31.47	8.71	41.06
2017 Actual	0.77	50.95	62.86	50.11	49.51	45.01	60.88	3.09	2.43	1.90	67.21	41.01	27.95	41.85
2018 Actual	0.77	65.04	68.90	49.99	50.26	45.09	73.00	2.96	1.53	1.27	79.47	N/A	N/A	N/A
<b>2019 Forecast</b>	<b>0.76</b>	<b>60.00</b>	<b>70.00</b>	<b>55.00</b>	<b>55.00</b>	<b>50.00</b>	<b>75.00</b>	<b>3.00</b>	<b>1.85</b>	<b>1.60</b>	<b>75.00</b>	<b>51.00</b>	<b>34.00</b>	<b>70.00</b>
2020 Forecast	0.78	65.00	75.00	60.00	60.00	55.00	78.00	3.20	2.25	2.00	80.00	53.00	36.00	70.00
2021 Forecast	0.80	70.00	80.00	65.00	65.00	60.00	81.00	3.40	2.75	2.50	85.00	55.00	38.00	70.00
2022 Forecast	0.81	72.00	83.00	68.00	68.00	63.00	83.00	3.60	3.00	2.75	87.00	57.00	40.00	70.00
2023 Forecast	0.81	74.00	86.00	71.00	71.00	66.00	85.00	3.70	3.25	3.00	89.00	59.00	42.00	70.00
2024 Forecast	0.81	76.00	89.00	74.00	74.00	69.00	87.00	3.80	3.35	3.10	91.00	61.00	44.00	70.00

Prices escalating at 2.0 percent annually thereafter.

### NOTES:

- (1) Oil and Condensate subject to quality differentials and transportation.
- (2) Light oil prices for 40.0 degrees API, 0.3% sulphur at Edmonton (Light Sweet Crude).
- (3) Bow River Blend at Hardisty oil prices for 20-24 degrees API (Medium Sour Crude).
- (4) Western Canada Select (WCS) prices at Hardisty (Heavy Sour Crude).
- (5) Heavy oil prices for 12 degrees API at Hardisty (Heavy Sour Crude).
- (6) Light oil prices for 35 degrees API at Cromer (Light Sour Blend).
- (7) Alberta gas prices are quoted at AECO (NOVA Inventory Transfer - NIT), B.C gas prices at Station #2.
- (8) Alberta reference price.
- (9) Operating & capital costs are forecast to escalate at 2.0%.