



# McDaniel & Associates Consultants Ltd.

## Summary of Price Forecasts (Real Prices - 2022 \$)

April 1, 2022

Year	Crude Oil Price Forecasts							Liquids Price Forecasts					Gas Price Forecasts								US/CAN Exchange Rate \$US/\$CAN
	WTI Crude Oil	Brent Crude Oil	Edmonton Light Crude Oil	Alberta Hardisty Crude Oil	Western Canadian Select Crude Oil	Alberta Heavy Crude Oil	Sask Cromer Medium Crude Oil	Edmonton Ethane	Edmonton Propane	Edmonton Butanes	Edmonton Cond. & Natural Gasolines	U.S. Henry Hub Gas Price	Alberta AECO Spot Price	Alberta Average Plantgate	Alberta Aggregator Plantgate	Empress	Sask. Prov. Gas Plantgate	British Columbia Average Plantgate	British Columbia Station 2	Inflation %	
	\$/bbl	\$/bbl	\$/bbl	\$/bbl	\$/bbl	\$/bbl	\$/bbl	\$/bbl	\$/bbl	\$/bbl	\$/bbl	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/MMBtu	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)					(8)	(9)								
<b>History</b>																					
2012	94.20	111.65	86.10	74.35	73.10	63.65	82.10		28.60	69.55	100.80	2.75	2.45	2.25	2.25	2.30	2.30	2.25	2.40	1.55	1.000
2013	97.95	108.60	93.05	76.55	75.25	65.25	88.25		38.90	69.40	104.65	3.75	3.20	3.00	3.00	3.10	3.10	2.95	3.10	0.95	0.970
2014	93.00	99.00	93.50	80.40	79.10	71.20	87.80		45.05	69.60	102.40	4.35	4.40	4.20	4.20	4.55	4.40	4.05	4.20	1.90	0.905
2015	48.80	52.35	57.75	46.10	44.80	39.55	51.45		6.60	36.50	60.30	2.60	2.80	2.60	2.60	3.00	2.70	2.00	2.10	1.10	0.785
2016	43.30	43.55	53.90	40.45	39.15	33.35	49.10		13.15	34.35	56.15	2.50	2.10	1.90	1.90	2.30	2.20	1.55	1.65	1.45	0.755
2017	50.90	54.25	62.85	52.00	50.70	45.20	59.85		28.90	44.60	66.85	3.00	2.40	2.20	2.20	2.85	2.40	1.80	1.95	1.60	0.770
2018	64.95	71.05	69.65	51.25	49.95	40.00	70.20		27.55	32.80	79.20	3.05	1.55	1.35	1.35	3.00	1.60	1.20	1.40	2.25	0.770
2019	57.00	64.35	69.00	60.00	58.70	54.80	68.00		17.40	23.55	70.30	2.55	1.60	1.40	1.40	2.75	1.75	1.00	1.15	2.00	0.755
2020	39.25	41.75	45.00	36.50	35.40	30.70	43.75		16.40	22.15	49.15	2.05	2.25	2.05	2.05	2.30	2.45	2.05	2.20	0.75	0.745
2021	68.00	70.70	80.35	69.40	68.85	63.15	77.75		43.10	51.15	85.50	3.90	3.55	3.35	3.35	3.90	3.95	3.30	3.45	3.40	0.800
2022 (3 mos)	94.60	100.40	116.00	101.55	101.35	94.35	109.90		58.30	71.20	122.05	4.65	4.60	4.40	4.40	5.00	5.00	4.60	4.75	4.60	0.790
<b>Forecast</b>																					
2022 (9 mos)	94.50	97.00	115.63	103.48	102.91	95.39	109.84	20.40	57.81	69.38	119.13	5.75	5.30	5.10	5.10	5.70	5.70	5.05	5.25	0.0	0.800
2023	82.50	85.00	98.22	83.98	83.49	76.12	93.31	16.00	49.11	58.93	101.72	4.35	4.20	4.00	4.00	4.45	4.45	3.95	4.15	2.0	0.800
2024	74.50	77.00	87.12	74.49	74.05	67.52	82.76	13.40	43.56	52.27	90.62	3.60	3.55	3.35	3.35	3.80	3.80	3.30	3.50	2.0	0.800
2025	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800
2026	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800
2027	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800
2028	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800
2029	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800
2030	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800
2031	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800
2032	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800
2033	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800
2034	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800
2035	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800
2036	67.50	70.00	78.37	67.00	66.61	60.73	74.45	12.20	39.18	47.02	81.87	3.35	3.25	3.05	3.05	3.50	3.50	3.00	3.20	2.0	0.800

(1) West Texas Intermediate at Cushing Oklahoma 40 degrees API, 0.5% sulphur

(2) North Sea Brent Blend 37 degrees API, 1.0% sulphur

(3) Edmonton Light Sweet 40 degrees API, 0.3% sulphur

(4) Bow River at Hardisty, Alberta (Heavy stream)

(5) Western Canadian Select at Hardisty, Alberta

(6) Heavy crude oil 12 degrees API at Hardisty, Alberta (after deduction of blending costs to reach pipeline quality)

(7) Midale Cromer crude oil 29 degrees API, 2.0% sulphur

(8) Historical prices based on AECO 7A (near month prices). 5A (daily price) expected to be equal to 7A over long term. 2021 historical prices: 7A \$3.55/MMBTU, 5A \$3.60/MMBTU

(9) This forecast also applies to direct sales contracts and the Alberta gas reference price used in the Crown royalty calculations