

Table 1
GLJ Petroleum Consultants
Crude Oil and Natural Gas Liquids
Price Forecast
 Effective October 1, 2017

Year	Inflation %	CADUSD Exchange Rate USD/CAD	NYMEX WTI Near Month Contract Crude Oil at Cushing, OK		Brent Blend 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 Crude Oil Stream Quality at Hardisty	Heavy Crude Oil Proxy (12 API) at Hardisty	Light Sour 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 2017 \$ 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	Edmonton C5+ Stream Quality CAD/bbl
2007	2.1	0.9352	85.33	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	0.9428	114.97	99.64	98.30	102.90	84.31	82.95	74.94	96.08	93.10	N/A	58.38	75.33	104.78	
2009	0.4	0.8798	69.58	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	0.9711	89.23	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	1.0115	104.88	95.12	110.86	95.53	78.59	77.14	67.64	92.35	88.33	N/A	53.66	74.42	104.17	
2012	1.5	1.0009	100.92	94.21	111.71	86.60	74.42	73.13	63.64	84.51	81.37	N/A	29.04	66.70	100.84	
2013	0.9	0.9711	103.38	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	1.9	0.9055	97.22	93.00	99.71	94.58	81.08	81.03	73.73	92.68	89.67	N/A	45.53	69.20	102.44	
2015	1.1	0.7831	50.03	48.78	53.60	57.20	45.50	44.82	39.25	55.49	51.87	N/A	6.49	36.75	60.42	
2016	1.4	0.7551	44.00	43.38	45.05	53.08	39.83	38.96	32.78	51.46	48.84	N/A	13.24	34.48	56.25	
2017 Q1	1.9	0.7560	51.90	51.90	54.68	63.94	49.84	49.36	42.45	62.30	59.71	N/A	27.49	44.94	69.09	
2017 Q2	1.3	0.7436	48.30	48.30	50.93	61.88	49.95	50.02	44.48	61.00	59.19	N/A	19.16	39.18	65.17	
2017 Q3 (e)	1.3	0.7985	48.17	48.17	51.74	56.77	48.78	48.02	43.68	56.42	54.93	N/A	26.41	40.29	59.12	
2017 Q4	2.0	0.8000	51.00	51.00	56.00	60.00	48.63	48.13	41.88	59.40	57.00	6.77	36.00	43.20	65.63	
2017 Full Year	1.6	0.7745	49.84	49.84	53.34	60.65	49.30	48.88	43.12	59.78	57.71	N/A	27.27	41.90	64.75	
2018	2.0	0.8000	51.96	53.00	57.00	62.50	49.25	48.75	42.22	61.25	58.13	8.28	31.25	43.75	67.19	
2019	2.0	0.8000	54.79	57.00	60.50	66.88	54.25	53.75	47.69	65.54	62.19	8.69	26.75	46.81	70.63	
2020	2.0	0.8250	56.54	60.00	63.00	67.88	56.26	55.76	49.85	66.52	63.13	9.39	27.15	47.52	72.12	
2021	2.0	0.8500	58.20	63.00	66.00	69.41	58.15	57.65	51.88	68.02	64.55	10.26	27.76	48.59	73.53	
2022	2.0	0.8500	59.78	66.00	69.00	72.94	61.68	61.18	55.41	71.48	67.84	10.88	29.18	51.06	77.06	
2023	2.0	0.8500	61.27	69.00	72.00	76.47	65.21	64.71	58.94	74.94	71.12	11.50	30.59	53.53	80.59	
2024	2.0	0.8500	62.68	72.00	75.00	80.00	68.74	68.24	62.47	78.40	74.40	12.09	32.00	56.00	84.12	
2025	2.0	0.8500	64.01	75.00	78.00	83.53	72.26	71.76	66.00	81.86	77.68	12.34	33.41	58.47	87.65	
2026	2.0	0.8500	65.00	77.68	80.68	86.68	75.42	74.92	69.15	84.95	80.61	12.59	34.67	60.68	90.80	
2027+	2.0	0.8500	65.00	+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.

Table 2
GLJ Petroleum Consultants
Natural Gas and Sulphur
Price Forecast
 Effective October 1, 2017

Year	NYMEX Henry Hub		Midwest Price at Chicago	AECO/NIT Spot	Alliance Transfer Pool Spot	Alberta Plant Gate			Saskatchewan Plant Gate			British Columbia		Sulphur FOB Vancouver	Alberta Sulphur at Plant Gate	
	Constant	Then	Then	Then	Then	Constant	Then	ARP	SaskEnergy	Spot	Sumas Spot	Westcoast Station 2	Spot Plant Gate			
	2017 \$	Current	Current	Current	Current	2017 \$	Current		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
2007	8.39	7.12	6.83	6.45	N/A	7.34	6.23	6.20	6.18	6.35	6.52	6.40	6.16	81.66	42.03	
2008	10.26	8.90	8.91	8.16	N/A	9.15	7.94	7.88	8.07	8.04	6.47	8.21	7.99	497.39	488.63	
2009	4.69	4.16	4.05	3.99	N/A	4.27	3.79	3.85	3.87	3.83	3.80	3.90	3.70	57.06	24.57	
2010	4.93	4.40	4.53	4.01	N/A	4.24	3.78	3.77	3.96	3.85	4.12	3.78	3.63	88.94	48.26	
2011	4.44	4.03	4.21	3.62	N/A	3.77	3.42	3.46	3.57	3.58	3.90	3.33	3.18	217.16	171.93	
2012	3.03	2.83	2.92	2.40	N/A	2.37	2.21	2.25	2.31	2.26	2.70	2.30	2.12	201.03	157.91	
2013	3.93	3.73	3.81	3.18	N/A	3.12	2.96	2.98	3.09	3.10	3.71	3.14	2.94	105.74	74.02	
2014	4.47	4.28	5.36	4.50	N/A	4.45	4.26	4.22	4.39	4.42	4.37	4.29	4.07	145.41	110.41	
2015	2.70	2.63	2.85	2.70	N/A	2.53	2.47	2.56	2.71	2.61	2.31	1.80	1.59	139.61	128.14	
2016	2.59	2.55	2.48	2.18	2.36	1.97	1.94	1.93	2.18	2.09	2.18	1.77	1.60	82.96	60.06	
2017 Q1	3.08	3.08	3.40	2.70	3.10	2.43	2.43	2.62	2.94	2.44	2.76	2.46	2.23	86.33	64.21	
2017 Q2	3.13	3.13	3.01	2.78	2.93	2.52	2.52	2.53	2.84	2.50	2.47	2.36	2.10	77.33	53.98	
2017 Q3 (e)	2.96	2.96	2.87	1.54	1.27	1.29	1.29	1.41	1.97	1.76	2.53	0.82	0.61	89.33	61.89	
2017 Q4	3.20	3.20	3.10	2.20	2.40	1.94	1.94	1.94	2.04	2.45	2.95	1.80	1.60	90.00	62.50	
2017 Full Year	3.09	3.09	3.10	2.30	2.43	2.05	2.05	2.13	2.45	2.29	2.68	1.86	1.63	85.75	60.64	
2018	3.14	3.20	3.10	2.64	2.74	2.33	2.38	2.38	2.48	2.54	2.70	2.24	2.03	90.00	62.50	
2019	3.08	3.20	3.10	2.76	2.76	2.40	2.50	2.50	2.60	2.66	2.70	2.46	2.25	100.00	75.00	
2020	3.16	3.35	3.25	2.96	2.96	2.54	2.70	2.70	2.80	2.86	2.85	2.71	2.50	102.00	73.64	
2021	3.28	3.55	3.45	3.22	3.22	2.72	2.95	2.95	3.05	3.11	3.05	2.96	2.75	104.04	72.40	
2022	3.40	3.75	3.65	3.40	3.40	2.83	3.13	3.13	3.23	3.29	3.25	3.14	2.93	106.12	74.85	
2023	3.51	3.95	3.85	3.58	3.58	2.93	3.30	3.30	3.40	3.48	3.45	3.32	3.11	108.24	77.34	
2024	3.60	4.14	4.04	3.75	3.75	3.02	3.47	3.47	3.57	3.65	3.64	3.50	3.29	110.40	79.88	
2025	3.60	4.22	4.12	3.82	3.82	3.03	3.55	3.55	3.65	3.72	3.72	3.58	3.36	112.62	82.49	
2026	3.60	4.30	4.20	3.90	3.90	3.03	3.62	3.62	3.72	3.80	3.80	3.64	3.42	114.87	85.14	
2027+	3.60	+2.0%/yr	+2.0%/yr	+2.0%/yr	+2.0%/yr	3.03	+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 gathering and processing charges are deducted.

Table 3
GLJ Petroleum Consultants
International and Frontier
Price Forecast
 Effective October 1, 2017

Year	Inflation %	CADUSD	GBPUSD	EURUSD	NYMEX WTI Near Month Contract Crude Oil at Cushing, OK		Light Louisiana Sweet Crude Oil		Maya Crude Oil		Brent Blend Crude Oil FOB North Sea		NYMEX Henry Hub Near Month Contract		Algonquin City-Gates		National Balancing Point (UK)		
		Exchange Rate	Exchange Rate	Exchange Rate	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then	Then
		USD/CAD	USD/GBP	USD/EUR	USD/bbl	CAD/bbl	USD/bbl	CAD/bbl	USD/bbl	CAD/bbl	USD/bbl	CAD/bbl	USD/MMBtu	CAD/MMBtu	USD/MMBtu	CAD/MMBtu	USD/MMBtu	CAD/MMBtu	USD/MMBtu
2007	2.1	0.9352	2.0017	1.3393	72.39	76.89	75.36	80.13	59.69	63.30	72.71	77.33	7.12	7.65	8.55	10.36	6.14	6.44	
2008	2.4	0.9428	1.8514	1.4573	99.64	104.27	102.31	107.04	83.90	87.62	98.30	102.81	8.90	9.36	8.55	10.36	11.41	12.12	
2009	0.4	0.8798	1.5649	1.3930	61.78	69.57	64.31	72.52	56.46	63.55	62.50	70.47	4.16	4.75	4.88	5.61	4.95	5.68	
2010	1.8	0.9711	1.5465	1.3274	79.52	81.85	82.78	85.20	70.29	72.35	80.25	82.58	4.40	4.53	5.33	5.50	6.39	6.58	
2011	2.9	1.0115	1.6038	1.3920	95.12	94.02	112.33	111.03	98.60	97.52	110.86	109.57	4.03	3.98	5.08	5.02	9.35	9.25	
2012	1.5	1.0009	1.5854	1.2861	94.21	94.11	111.77	111.62	99.60	99.50	111.71	111.57	2.83	2.82	3.99	3.99	9.38	9.37	
2013	0.9	0.9711	1.5645	1.3285	97.96	100.95	106.19	109.32	97.26	100.13	108.77	112.04	3.73	3.84	7.16	7.36	10.50	10.82	
2014	1.9	0.9055	1.6472	1.3288	93.00	102.50	94.24	103.88	85.79	94.53	99.71	109.89	4.28	4.72	8.33	9.21	8.25	9.12	
2015	1.1	0.7831	1.5283	1.1097	48.78	62.12	49.43	62.97	44.02	55.99	53.60	68.23	2.63	3.36	4.90	6.19	6.52	8.31	
2016	1.4	0.7551	1.3550	1.1066	43.38	57.33	45.08	59.58	36.40	48.09	45.05	59.54	2.55	3.38	3.22	4.29	4.66	6.18	
2017 Q1	1.9	0.7560	1.2393	1.0655	51.90	68.63	53.54	70.81	44.64	59.03	54.68	72.32	3.08	4.07	4.23	5.61	6.01	7.94	
2017 Q2	1.3	0.7436	1.2790	1.0999	48.30	64.97	50.31	67.68	43.91	59.06	50.93	68.51	3.13	4.22	3.09	4.16	4.85	6.53	
2017 Q3 (e)	1.3	0.7985	1.3094	1.1750	48.17	60.32	51.35	64.28	46.26	57.92	51.74	64.78	2.96	3.71	2.26	2.83	5.48	6.86	
2017 Q4	2.0	0.8000	1.3500	1.1750	51.00	63.75	55.00	68.75	48.72	60.90	56.00	70.00	3.20	4.00	4.40	5.50	6.80	8.50	
2017 Full Year	1.6	0.7745	1.2944	1.1289	49.84	64.42	52.55	67.88	45.88	59.23	53.34	68.90	3.09	4.00	3.50	4.52	5.79	7.46	
2018	2.0	0.8000	1.3000	1.1500	53.00	66.25	56.00	70.00	49.59	61.99	57.00	71.25	3.20	4.00	4.60	5.75	6.50	8.13	
2019	2.0	0.8000	1.3000	1.1500	57.00	71.25	59.50	74.38	52.64	65.79	60.50	75.63	3.20	4.00	4.60	5.75	6.50	8.13	
2020	2.0	0.8250	1.3000	1.1500	60.00	72.73	62.50	75.76	54.81	66.44	63.00	76.36	3.35	4.06	4.75	5.76	6.75	8.18	
2021	2.0	0.8500	1.3000	1.1500	63.00	74.12	65.50	77.06	57.42	67.55	66.00	77.65	3.55	4.18	4.75	5.59	7.00	8.24	
2022	2.0	0.8500	1.3000	1.1500	66.00	77.65	68.50	80.59	60.03	70.62	69.00	81.18	3.75	4.41	4.75	5.59	7.15	8.41	
2023	2.0	0.8500	1.3000	1.1500	69.00	81.18	71.50	84.12	62.64	73.69	72.00	84.71	3.95	4.65	4.95	5.82	7.30	8.59	
2024	2.0	0.8500	1.3000	1.1500	72.00	84.71	74.50	87.65	65.25	76.76	75.00	88.24	4.14	4.87	5.14	6.05	7.45	8.76	
2025	2.0	0.8500	1.3000	1.1500	75.00	88.24	77.50	91.18	67.86	79.84	78.00	91.76	4.22	4.96	5.22	6.14	7.60	8.94	
2026	2.0	0.8500	1.3000	1.1500	77.68	91.39	80.18	94.33	70.19	82.58	80.68	94.92	4.30	5.06	5.30	6.24	7.75	9.12	
2027+	2.0	0.8500	1.3000	1.1500	+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	+2.0%/yr

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

Table 4
 GLJ Petroleum Consultants
US Liquids and Natural Gas
Price Forecast
 Effective October 1, 2017

Year	US Natural Gas Liquids (Then Current Dollars)								US Natural Gas (Then Current Dollars)	
	Conway				Mont Belvieu				Rockies Natural Gas USD/MMBtu	Algonquin City-Gates Natural Gas USD/MMBtu
	80%-20% E/P Mix USD/bbl	Propane USD/bbl	Butane USD/bbl	Condensate USD/bbl	Ethane USD/bbl	Propane USD/bbl	Butane USD/bbl	Condensate USD/bbl		
2017 Q4	9.60	35.70	45.90	49.98	10.40	36.72	45.90	50.49	2.90	4.40
2018	9.60	31.80	39.75	51.41	10.40	32.86	39.75	51.94	2.90	4.60
2019	9.60	25.65	37.05	51.30	10.40	26.79	37.05	52.44	2.90	4.60
2020	10.05	27.00	39.00	54.00	10.89	28.20	39.00	55.20	3.05	4.75
2021	10.65	28.35	40.95	56.70	11.54	29.61	40.95	57.96	3.25	4.75
2022	11.25	29.70	42.90	59.40	12.19	31.02	42.90	60.72	3.45	4.75
2023	11.85	31.05	44.85	62.10	12.84	32.43	44.85	63.48	3.65	4.95
2024	12.42	32.40	46.80	64.80	13.45	33.84	46.80	66.24	3.84	5.14
2025	12.66	33.75	48.75	67.50	13.72	35.25	48.75	69.00	3.92	5.22
2026	12.90	34.96	50.49	69.91	13.97	36.51	50.49	71.47	4.00	5.30
2027+	+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

Butane prices at Conway and Mont Belvieu represent a blended price of two thirds normal butane and one third iso-butane.

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