



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Project	DJ Wattenberg		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	S29-T1N-R68W (Pratt/Waste Connections)				
Site Position:		Northing:	1,249,256.24 ft	Latitude:	40.016600
From:	Lat/Long	Easting:	3,133,726.79 ft	Longitude:	-105.022570
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.31 °

Well	Pratt 4C-29H-P168					
Well Position	+N/-S	0.0 ft	Northing:	1,249,256.35 ft	Latitude:	40.016600
	+E/-W	0.0 ft	Easting:	3,133,746.40 ft	Longitude:	-105.022500
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,176.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/23/2013	8.71	66.63	52,695

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	0.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,037.9	6.38	211.35	1,036.6	-30.3	-18.5	1.00	1.00	0.00	211.35	
7,452.1	6.38	211.35	7,411.0	-638.9	-389.2	0.00	0.00	0.00	0.00	
8,405.3	90.00	358.00	8,036.0	-70.1	-447.5	10.00	8.77	15.38	146.49	
17,245.3	90.00	358.00	8,036.0	8,764.5	-756.0	0.00	0.00	0.00	0.00	Pratt 4C-29H-P168 PI

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Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
500.0	1.00	211.35	500.0	-0.7	-0.5	-0.7	1.00	1.00	
600.0	2.00	211.35	600.0	-3.0	-1.8	-3.0	1.00	1.00	
700.0	3.00	211.35	699.9	-6.7	-4.1	-6.7	1.00	1.00	
789.3	3.89	211.35	789.0	-11.3	-6.9	-11.3	1.00	1.00	Fox Hills - BASE
800.0	4.00	211.35	799.7	-11.9	-7.3	-11.9	1.00	1.00	
900.0	5.00	211.35	899.4	-18.6	-11.3	-18.6	1.00	1.00	
1,000.0	6.00	211.35	998.9	-26.8	-16.3	-26.8	1.00	1.00	
1,037.9	6.38	211.35	1,036.6	-30.3	-18.5	-30.3	1.00	1.00	EOB; Inc=6.38°
1,100.0	6.38	211.35	1,098.3	-36.2	-22.0	-36.2	0.00	0.00	
1,200.0	6.38	211.35	1,197.7	-45.7	-27.8	-45.7	0.00	0.00	
1,300.0	6.38	211.35	1,297.1	-55.2	-33.6	-55.2	0.00	0.00	
1,400.0	6.38	211.35	1,396.4	-64.7	-39.4	-64.7	0.00	0.00	
1,500.0	6.38	211.35	1,495.8	-74.1	-45.2	-74.1	0.00	0.00	
1,600.0	6.38	211.35	1,595.2	-83.6	-50.9	-83.6	0.00	0.00	
1,700.0	6.38	211.35	1,694.6	-93.1	-56.7	-93.1	0.00	0.00	
1,800.0	6.38	211.35	1,794.0	-102.6	-62.5	-102.6	0.00	0.00	
1,900.0	6.38	211.35	1,893.3	-112.1	-68.3	-112.1	0.00	0.00	
2,000.0	6.38	211.35	1,992.7	-121.6	-74.1	-121.6	0.00	0.00	
2,100.0	6.38	211.35	2,092.1	-131.1	-79.8	-131.1	0.00	0.00	
2,200.0	6.38	211.35	2,191.5	-140.6	-85.6	-140.6	0.00	0.00	
2,300.0	6.38	211.35	2,290.9	-150.1	-91.4	-150.1	0.00	0.00	
2,400.0	6.38	211.35	2,390.3	-159.5	-97.2	-159.5	0.00	0.00	
2,500.0	6.38	211.35	2,489.6	-169.0	-103.0	-169.0	0.00	0.00	
2,600.0	6.38	211.35	2,589.0	-178.5	-108.7	-178.5	0.00	0.00	
2,700.0	6.38	211.35	2,688.4	-188.0	-114.5	-188.0	0.00	0.00	
2,800.0	6.38	211.35	2,787.8	-197.5	-120.3	-197.5	0.00	0.00	
2,900.0	6.38	211.35	2,887.2	-207.0	-126.1	-207.0	0.00	0.00	
3,000.0	6.38	211.35	2,986.5	-216.5	-131.9	-216.5	0.00	0.00	
3,100.0	6.38	211.35	3,085.9	-226.0	-137.6	-226.0	0.00	0.00	
3,200.0	6.38	211.35	3,185.3	-235.4	-143.4	-235.4	0.00	0.00	
3,300.0	6.38	211.35	3,284.7	-244.9	-149.2	-244.9	0.00	0.00	
3,400.0	6.38	211.35	3,384.1	-254.4	-155.0	-254.4	0.00	0.00	
3,500.0	6.38	211.35	3,483.4	-263.9	-160.8	-263.9	0.00	0.00	
3,600.0	6.38	211.35	3,582.8	-273.4	-166.5	-273.4	0.00	0.00	
3,700.0	6.38	211.35	3,682.2	-282.9	-172.3	-282.9	0.00	0.00	
3,800.0	6.38	211.35	3,781.6	-292.4	-178.1	-292.4	0.00	0.00	
3,900.0	6.38	211.35	3,881.0	-301.9	-183.9	-301.9	0.00	0.00	
4,000.0	6.38	211.35	3,980.3	-311.4	-189.6	-311.4	0.00	0.00	
4,100.0	6.38	211.35	4,079.7	-320.8	-195.4	-320.8	0.00	0.00	
4,200.0	6.38	211.35	4,179.1	-330.3	-201.2	-330.3	0.00	0.00	
4,300.0	6.38	211.35	4,278.5	-339.8	-207.0	-339.8	0.00	0.00	
4,400.0	6.38	211.35	4,377.9	-349.3	-212.8	-349.3	0.00	0.00	
4,500.0	6.38	211.35	4,477.2	-358.8	-218.5	-358.8	0.00	0.00	
4,600.0	6.38	211.35	4,576.6	-368.3	-224.3	-368.3	0.00	0.00	
4,700.0	6.38	211.35	4,676.0	-377.8	-230.1	-377.8	0.00	0.00	
4,790.5	6.38	211.35	4,766.0	-386.4	-235.3	-386.4	0.00	0.00	Sussex
4,800.0	6.38	211.35	4,775.4	-387.3	-235.9	-387.3	0.00	0.00	

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Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,900.0	6.38	211.35	4,874.8	-396.8	-241.7	-396.8	0.00	0.00	
5,000.0	6.38	211.35	4,974.2	-406.2	-247.4	-406.2	0.00	0.00	
5,100.0	6.38	211.35	5,073.5	-415.7	-253.2	-415.7	0.00	0.00	
5,105.5	6.38	211.35	5,079.0	-416.3	-253.5	-416.3	0.00	0.00	Sussex Marker
5,200.0	6.38	211.35	5,172.9	-425.2	-259.0	-425.2	0.00	0.00	
5,300.0	6.38	211.35	5,272.3	-434.7	-264.8	-434.7	0.00	0.00	
5,400.0	6.38	211.35	5,371.7	-444.2	-270.6	-444.2	0.00	0.00	
5,471.8	6.38	211.35	5,443.0	-451.0	-274.7	-451.0	0.00	0.00	Shannon
5,500.0	6.38	211.35	5,471.1	-453.7	-276.3	-453.7	0.00	0.00	
5,600.0	6.38	211.35	5,570.4	-463.2	-282.1	-463.2	0.00	0.00	
5,700.0	6.38	211.35	5,669.8	-472.7	-287.9	-472.7	0.00	0.00	
5,800.0	6.38	211.35	5,769.2	-482.1	-293.7	-482.1	0.00	0.00	
5,900.0	6.38	211.35	5,868.6	-491.6	-299.5	-491.6	0.00	0.00	
6,000.0	6.38	211.35	5,968.0	-501.1	-305.2	-501.1	0.00	0.00	
6,100.0	6.38	211.35	6,067.3	-510.6	-311.0	-510.6	0.00	0.00	
6,200.0	6.38	211.35	6,166.7	-520.1	-316.8	-520.1	0.00	0.00	
6,300.0	6.38	211.35	6,266.1	-529.6	-322.6	-529.6	0.00	0.00	
6,400.0	6.38	211.35	6,365.5	-539.1	-328.4	-539.1	0.00	0.00	
6,500.0	6.38	211.35	6,464.9	-548.6	-334.1	-548.6	0.00	0.00	
6,535.4	6.38	211.35	6,500.0	-551.9	-336.2	-551.9	0.00	0.00	Teepee Buttes (*if present)
6,600.0	6.38	211.35	6,564.2	-558.1	-339.9	-558.1	0.00	0.00	
6,700.0	6.38	211.35	6,663.6	-567.5	-345.7	-567.5	0.00	0.00	
6,800.0	6.38	211.35	6,763.0	-577.0	-351.5	-577.0	0.00	0.00	
6,900.0	6.38	211.35	6,862.4	-586.5	-357.3	-586.5	0.00	0.00	
7,000.0	6.38	211.35	6,961.8	-596.0	-363.0	-596.0	0.00	0.00	
7,100.0	6.38	211.35	7,061.2	-605.5	-368.8	-605.5	0.00	0.00	
7,200.0	6.38	211.35	7,160.5	-615.0	-374.6	-615.0	0.00	0.00	
7,300.0	6.38	211.35	7,259.9	-624.5	-380.4	-624.5	0.00	0.00	
7,400.0	6.38	211.35	7,359.3	-634.0	-386.2	-634.0	0.00	0.00	
7,452.1	6.38	211.35	7,411.0	-638.9	-389.2	-638.9	0.00	0.00	Start build/turn @ 7452' MD
7,500.0	3.56	259.38	7,458.8	-641.5	-392.0	-641.5	10.00	-5.89	
7,588.7	9.04	335.28	7,547.0	-635.6	-397.6	-635.6	10.00	6.18	Sharon Springs
7,600.0	10.09	337.81	7,558.2	-633.9	-398.4	-633.9	10.00	9.29	
7,622.2	12.20	341.49	7,580.0	-629.9	-399.9	-629.9	10.00	9.48	Niobrara
7,700.0	19.77	348.16	7,654.7	-609.2	-405.2	-609.2	10.00	9.73	
7,800.0	29.66	351.80	7,745.4	-568.0	-412.2	-568.0	10.00	9.89	
7,835.8	33.21	352.61	7,776.0	-549.5	-414.7	-549.5	10.00	9.93	B Chalk
7,850.3	34.65	352.90	7,788.0	-541.5	-415.7	-541.5	10.00	9.94	B Marl
7,900.0	39.60	353.74	7,827.6	-511.7	-419.2	-511.7	10.00	9.95	
7,977.7	47.34	354.75	7,884.0	-458.5	-424.5	-458.5	10.00	9.96	C Chalk
8,000.0	49.56	355.00	7,898.8	-441.9	-426.0	-441.9	10.00	9.97	
8,005.0	50.06	355.05	7,902.0	-438.1	-426.4	-438.1	10.00	9.97	C Marl
8,100.0	59.53	355.93	7,956.7	-360.8	-432.4	-360.8	10.00	9.97	
8,200.0	69.51	356.68	7,999.7	-270.9	-438.2	-270.9	10.00	9.98	
8,222.1	71.71	356.84	8,007.0	-250.1	-439.4	-250.1	10.00	9.98	Ft. Hayes
8,298.0	79.29	357.33	8,026.0	-176.7	-443.1	-176.7	10.00	9.98	Codell
8,300.0	79.49	357.35	8,026.4	-174.8	-443.2	-174.8	10.00	9.98	
8,400.0	89.47	357.97	8,036.0	-75.4	-447.3	-75.4	10.00	9.98	
8,405.3	90.00	358.00	8,036.0	-70.1	-447.5	-70.1	10.00	9.98	LP @ 8036' TVD; 90°
8,500.0	90.00	358.00	8,036.0	24.5	-450.8	24.5	0.00	0.00	
8,600.0	90.00	358.00	8,036.0	124.4	-454.2	124.4	0.00	0.00	
8,700.0	90.00	358.00	8,036.0	224.4	-457.7	224.4	0.00	0.00	

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Project:	DJ Wattenberg	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,800.0	90.00	358.00	8,036.0	324.3	-461.2	324.3	0.00	0.00	
8,900.0	90.00	358.00	8,036.0	424.3	-464.7	424.3	0.00	0.00	
9,000.0	90.00	358.00	8,036.0	524.2	-468.2	524.2	0.00	0.00	
9,100.0	90.00	358.00	8,036.0	624.1	-471.7	624.1	0.00	0.00	
9,200.0	90.00	358.00	8,036.0	724.1	-475.2	724.1	0.00	0.00	
9,300.0	90.00	358.00	8,036.0	824.0	-478.7	824.0	0.00	0.00	
9,400.0	90.00	358.00	8,036.0	924.0	-482.2	924.0	0.00	0.00	
9,500.0	90.00	358.00	8,036.0	1,023.9	-485.7	1,023.9	0.00	0.00	
9,600.0	90.00	358.00	8,036.0	1,123.8	-489.1	1,123.8	0.00	0.00	
9,700.0	90.00	358.00	8,036.0	1,223.8	-492.6	1,223.8	0.00	0.00	
9,800.0	90.00	358.00	8,036.0	1,323.7	-496.1	1,323.7	0.00	0.00	
9,900.0	90.00	358.00	8,036.0	1,423.7	-499.6	1,423.7	0.00	0.00	
10,000.0	90.00	358.00	8,036.0	1,523.6	-503.1	1,523.6	0.00	0.00	
10,100.0	90.00	358.00	8,036.0	1,623.5	-506.6	1,623.5	0.00	0.00	
10,200.0	90.00	358.00	8,036.0	1,723.5	-510.1	1,723.5	0.00	0.00	
10,300.0	90.00	358.00	8,036.0	1,823.4	-513.6	1,823.4	0.00	0.00	
10,400.0	90.00	358.00	8,036.0	1,923.4	-517.1	1,923.4	0.00	0.00	
10,500.0	90.00	358.00	8,036.0	2,023.3	-520.6	2,023.3	0.00	0.00	
10,600.0	90.00	358.00	8,036.0	2,123.2	-524.0	2,123.2	0.00	0.00	
10,700.0	90.00	358.00	8,036.0	2,223.2	-527.5	2,223.2	0.00	0.00	
10,800.0	90.00	358.00	8,036.0	2,323.1	-531.0	2,323.1	0.00	0.00	
10,900.0	90.00	358.00	8,036.0	2,423.0	-534.5	2,423.0	0.00	0.00	
11,000.0	90.00	358.00	8,036.0	2,523.0	-538.0	2,523.0	0.00	0.00	
11,100.0	90.00	358.00	8,036.0	2,622.9	-541.5	2,622.9	0.00	0.00	
11,200.0	90.00	358.00	8,036.0	2,722.9	-545.0	2,722.9	0.00	0.00	
11,300.0	90.00	358.00	8,036.0	2,822.8	-548.5	2,822.8	0.00	0.00	
11,400.0	90.00	358.00	8,036.0	2,922.7	-552.0	2,922.7	0.00	0.00	
11,500.0	90.00	358.00	8,036.0	3,022.7	-555.5	3,022.7	0.00	0.00	
11,600.0	90.00	358.00	8,036.0	3,122.6	-558.9	3,122.6	0.00	0.00	
11,700.0	90.00	358.00	8,036.0	3,222.6	-562.4	3,222.6	0.00	0.00	
11,800.0	90.00	358.00	8,036.0	3,322.5	-565.9	3,322.5	0.00	0.00	
11,900.0	90.00	358.00	8,036.0	3,422.4	-569.4	3,422.4	0.00	0.00	
12,000.0	90.00	358.00	8,036.0	3,522.4	-572.9	3,522.4	0.00	0.00	
12,100.0	90.00	358.00	8,036.0	3,622.3	-576.4	3,622.3	0.00	0.00	
12,200.0	90.00	358.00	8,036.0	3,722.3	-579.9	3,722.3	0.00	0.00	
12,300.0	90.00	358.00	8,036.0	3,822.2	-583.4	3,822.2	0.00	0.00	
12,400.0	90.00	358.00	8,036.0	3,922.1	-586.9	3,922.1	0.00	0.00	
12,500.0	90.00	358.00	8,036.0	4,022.1	-590.4	4,022.1	0.00	0.00	
12,600.0	90.00	358.00	8,036.0	4,122.0	-593.8	4,122.0	0.00	0.00	
12,700.0	90.00	358.00	8,036.0	4,221.9	-597.3	4,221.9	0.00	0.00	
12,800.0	90.00	358.00	8,036.0	4,321.9	-600.8	4,321.9	0.00	0.00	
12,900.0	90.00	358.00	8,036.0	4,421.8	-604.3	4,421.8	0.00	0.00	
13,000.0	90.00	358.00	8,036.0	4,521.8	-607.8	4,521.8	0.00	0.00	
13,100.0	90.00	358.00	8,036.0	4,621.7	-611.3	4,621.7	0.00	0.00	
13,200.0	90.00	358.00	8,036.0	4,721.6	-614.8	4,721.6	0.00	0.00	
13,300.0	90.00	358.00	8,036.0	4,821.6	-618.3	4,821.6	0.00	0.00	
13,400.0	90.00	358.00	8,036.0	4,921.5	-621.8	4,921.5	0.00	0.00	
13,500.0	90.00	358.00	8,036.0	5,021.5	-625.3	5,021.5	0.00	0.00	
13,600.0	90.00	358.00	8,036.0	5,121.4	-628.7	5,121.4	0.00	0.00	
13,700.0	90.00	358.00	8,036.0	5,221.3	-632.2	5,221.3	0.00	0.00	
13,800.0	90.00	358.00	8,036.0	5,321.3	-635.7	5,321.3	0.00	0.00	
13,900.0	90.00	358.00	8,036.0	5,421.2	-639.2	5,421.2	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
14,000.0	90.00	358.00	8,036.0	5,521.2	-642.7	5,521.2	0.00	0.00	
14,100.0	90.00	358.00	8,036.0	5,621.1	-646.2	5,621.1	0.00	0.00	
14,200.0	90.00	358.00	8,036.0	5,721.0	-649.7	5,721.0	0.00	0.00	
14,300.0	90.00	358.00	8,036.0	5,821.0	-653.2	5,821.0	0.00	0.00	
14,400.0	90.00	358.00	8,036.0	5,920.9	-656.7	5,920.9	0.00	0.00	
14,500.0	90.00	358.00	8,036.0	6,020.9	-660.2	6,020.9	0.00	0.00	
14,600.0	90.00	358.00	8,036.0	6,120.8	-663.6	6,120.8	0.00	0.00	
14,700.0	90.00	358.00	8,036.0	6,220.7	-667.1	6,220.7	0.00	0.00	
14,800.0	90.00	358.00	8,036.0	6,320.7	-670.6	6,320.7	0.00	0.00	
14,900.0	90.00	358.00	8,036.0	6,420.6	-674.1	6,420.6	0.00	0.00	
15,000.0	90.00	358.00	8,036.0	6,520.5	-677.6	6,520.5	0.00	0.00	
15,100.0	90.00	358.00	8,036.0	6,620.5	-681.1	6,620.5	0.00	0.00	
15,200.0	90.00	358.00	8,036.0	6,720.4	-684.6	6,720.4	0.00	0.00	
15,300.0	90.00	358.00	8,036.0	6,820.4	-688.1	6,820.4	0.00	0.00	
15,400.0	90.00	358.00	8,036.0	6,920.3	-691.6	6,920.3	0.00	0.00	
15,500.0	90.00	358.00	8,036.0	7,020.2	-695.1	7,020.2	0.00	0.00	
15,600.0	90.00	358.00	8,036.0	7,120.2	-698.5	7,120.2	0.00	0.00	
15,700.0	90.00	358.00	8,036.0	7,220.1	-702.0	7,220.1	0.00	0.00	
15,800.0	90.00	358.00	8,036.0	7,320.1	-705.5	7,320.1	0.00	0.00	
15,900.0	90.00	358.00	8,036.0	7,420.0	-709.0	7,420.0	0.00	0.00	
16,000.0	90.00	358.00	8,036.0	7,519.9	-712.5	7,519.9	0.00	0.00	
16,100.0	90.00	358.00	8,036.0	7,619.9	-716.0	7,619.9	0.00	0.00	
16,200.0	90.00	358.00	8,036.0	7,719.8	-719.5	7,719.8	0.00	0.00	
16,300.0	90.00	358.00	8,036.0	7,819.8	-723.0	7,819.8	0.00	0.00	
16,400.0	90.00	358.00	8,036.0	7,919.7	-726.5	7,919.7	0.00	0.00	
16,500.0	90.00	358.00	8,036.0	8,019.6	-730.0	8,019.6	0.00	0.00	
16,600.0	90.00	358.00	8,036.0	8,119.6	-733.4	8,119.6	0.00	0.00	
16,700.0	90.00	358.00	8,036.0	8,219.5	-736.9	8,219.5	0.00	0.00	
16,800.0	90.00	358.00	8,036.0	8,319.5	-740.4	8,319.5	0.00	0.00	
16,900.0	90.00	358.00	8,036.0	8,419.4	-743.9	8,419.4	0.00	0.00	
17,000.0	90.00	358.00	8,036.0	8,519.3	-747.4	8,519.3	0.00	0.00	
17,100.0	90.00	358.00	8,036.0	8,619.3	-750.9	8,619.3	0.00	0.00	
17,200.0	90.00	358.00	8,036.0	8,719.2	-754.4	8,719.2	0.00	0.00	
17,245.3	90.00	358.00	8,036.0	8,764.5	-756.0	8,764.5	0.00	0.00	TD at 17245.3 - Pratt 4C-29H-P168 PBHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Pratt 4C-29H-P168 PBH - hit/miss target - Shape	0.00	0.00	8,036.0	8,764.5	-756.0	1,258,016.65	3,132,943.25	40.040660	-105.025200
- plan hits target center									
- Point									

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
789.3	789.0	Fox Hills - BASE				
4,790.5	4,766.0	Sussex				
5,105.5	5,079.0	Sussex Marker				
5,471.8	5,443.0	Shannon				
6,535.4	6,500.0	Teepee Buttes (*if present)				
7,588.7	7,547.0	Sharon Springs				
7,622.2	7,580.0	Niobrara				
7,835.8	7,776.0	B Chalk				
7,850.3	7,788.0	B Marl				
7,977.7	7,884.0	C Chalk				
8,005.0	7,902.0	C Marl				
8,222.1	8,007.0	Ft. Hayes				
8,298.0	8,026.0	Codell				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
400.0	400.0	0.0	0.0	KOP @ 400'	
1,037.9	1,036.6	-30.3	-18.5	EOB; Inc=6.38°	
7,452.1	7,411.0	-638.9	-389.2	Start build/turn @ 7452' MD	
8,405.3	8,036.0	-70.1	-447.5	LP @ 8036' TVD; 90°	
17,245.3	8,036.0	8,764.5	-756.0	TD at 17245.3	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S29-T1N-R68W (Pratt/Waste Connections)

Pratt 4C-29H-P168

Hz

Plan #1

Anticollision Report

31 May, 2013

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	5/31/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	17,245.3	Plan #1 (Hz)	MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S29-T1N-R68W (Pratt/Waste Connections)						
COSTIGAN 0-6-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 0-8-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 13-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 14-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 23-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 24-20 (EXISTING) - ENCANA WELL - ENCA						Out of range
COSTIGAN 33-20 (EXISTING) - ENCANA WELL - ENCA	15,097.3	8,261.9	149.7	6.7	1.047	Level 2, CC
COSTIGAN 33-20 (EXISTING) - ENCANA WELL - ENCA	15,100.0	8,261.9	149.7	6.7	1.047	Level 2, ES, SF
COSTIGAN 34-20 (EXISTING) - ENCANA WELL - PLAN	13,632.1	8,163.9	322.7	212.8	2.937	CC, ES, SF
COSTIGAN 43-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 4-6-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 6-8-20 (EXISTING) - ENCANA WELL - PLAN	13,147.3	8,133.1	488.7	382.3	4.593	CC, ES
COSTIGAN 6-8-20 (EXISTING) - ENCANA WELL - PLAN	13,200.0	8,133.1	491.5	384.2	4.581	SF
COSTIGAN 8-6-20 (EXISTING) - ENCANA WELL - SUR						Out of range
COSTIGAN 8-8-20 (EXISTING) - ENCANA WELL - SUR						Out of range
COSTIGAN E UNIT 1 (EXISTING) - ENCANA WELL - NO						Out of range
COSTIGAN H UNIT 1 (EXISTING) - VESSELS WELL - N						Out of range
EDWARD P COSTIGAN 1 (EXISTING) - ENCANA WELL						Out of range
M E DRIER 1 (EXISTING) - SYNERGY WELL - NO SUR						Out of range
PRATT 0-2-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
PRATT 1 (EXISTING) - SYNERGY WELL - NO SURVEY						Out of range
PRATT 12-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 2 (EXISTING) - SYNERGY WELL - NO SURVEY						Out of range
PRATT 2-0-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
PRATT 21-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 22-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 2-4-29 (EXISTING) - ENCANA WELL - PLAN ON						Out of range
PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURV	400.0	388.0	312.7	311.4	231.155	CC, ES
PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURV	2,400.0	2,378.3	492.8	484.4	58.925	SF
PRATT 4-2-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
Pratt 4B-29H-P168 - Hz - Plan #1	300.0	300.0	8.4	7.4	8.387	CC, ES
Pratt 4B-29H-P168 - Hz - Plan #1	600.0	599.5	13.1	11.1	6.401	SF
Pratt 4D-29H-P168 - Hz - Plan #1	400.0	400.0	11.2	9.9	8.293	CC, ES
Pratt 4D-29H-P168 - Hz - Plan #1	1,000.0	1,000.7	18.5	15.0	5.289	SF
Pratt 4E-29H-P168 - Hz - Plan #1	400.0	400.0	19.6	18.3	14.513	CC, ES
Pratt 4E-29H-P168 - Hz - Plan #1	12,500.0	12,485.1	498.8	350.9	3.372	SF
Pratt 4F-29H-P168 - Hz - Plan #1	400.0	400.0	30.8	29.5	22.807	CC, ES
Pratt 4F-29H-P168 - Hz - Plan #1	700.0	699.3	37.0	34.5	15.349	SF
Pratt 4G-29H-P168 - Hz - Plan #1	400.0	400.0	39.2	37.9	29.027	CC, ES
Pratt 4G-29H-P168 - Hz - Plan #1	700.0	698.1	49.4	47.0	20.486	SF
PRATT F UNIT 1 (EXISTING) - ENCANA WELL - NO SU						Out of range
SRC PRATT 13-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 14-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 24-29 PD (EXISTING) - SYNERGY WELL -						Out of range
SRC PRATT 29HD (EXISTING) - SYNERGY WELL - PL						Out of range
SRC PRATT 29LD (EXISTING) - SYNERGY WELL - PLA						Out of range
SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SU	624.1	640.8	311.3	308.9	128.720	CC, ES
SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SU	1,600.0	1,532.9	477.3	469.1	57.840	SF
SRC PRATT 29QD (EXISTING) - SYNERGY WELL - PL						Out of range
SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SU	10,516.1	8,176.2	401.1	339.3	6.484	CC, ES
SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SU	10,600.0	8,177.7	409.8	346.5	6.480	SF
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	3,492.6	3,556.1	153.4	134.0	7.898	CC
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	3,500.0	3,563.2	153.4	133.9	7.869	ES

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S29-T1N-R68W (Pratt/Waste Connections)						
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	5,900.0	5,973.4	229.4	197.0	7.078	SF
SRC PRATT 29XD (EXISTING) - SYNERGY WELL - PLA	200.0	190.0	296.9	296.3	451.286	CC, ES
SRC PRATT 29XD (EXISTING) - SYNERGY WELL - PLA	1,300.0	1,206.6	490.5	485.7	100.802	SF
SRC PRATT 31-29D (EXISTING) - SYNERGY WELL - S	12,504.3	8,262.0	199.6	101.5	2.035	CC, ES, SF
SRC PRATT 32-29D (EXISTING) - SYNERGY WELL - S	11,144.8	8,189.0	211.4	145.4	3.204	CC, ES, SF
SRC PRATT 33-29PD (EXISTING) - SYNERGY WELL -	9,836.1	8,208.9	252.1	199.0	4.750	CC, ES, SF
SRC PRATT 34-29D (EXISTING) - SYNERGY WELL - S	8,533.7	8,123.9	205.0	175.3	6.892	CC, ES, SF
SRC PRATT 41-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 42-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - S	0.0	4.0	314.5			
SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - S	200.0	203.4	314.7	314.0	475.640	ES
SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - S	1,200.0	1,089.5	497.5	493.5	123.499	SF
SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - P	400.0	392.0	293.3	291.9	215.693	CC, ES
SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - P	2,300.0	2,270.7	490.6	481.2	52.526	SF
Waste Connections 3A-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3B-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3C-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3D-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3E-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3F-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3G-29H-M168 - Hz - Plan #1						Out of range
WILLIAM H PELTIER 1 (EXISTING) - VESSELS WELL -						Out of range
WILLIAM H PELTIER 2 (EXISTING) - ENCANA WELL - P						Out of range
WILLIAM H PELTIER 2 (EXISTING) - ENCANA WELL - S						Out of range
WILLIAM PELTIER 11-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 12-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 12-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 1A-20H (EXISTING) - ENCANA WEL	17,100.0	9,507.8	324.3	275.1	6.600	SF
WILLIAM PELTIER 1A-20H (EXISTING) - ENCANA WEL	17,200.0	9,484.8	302.9	259.3	6.951	ES
WILLIAM PELTIER 1A-20H (EXISTING) - ENCANA WEL	17,221.0	9,479.8	302.2	259.4	7.067	CC
WILLIAM PELTIER 2-0-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 22-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 2-4-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 4-2-20 (EXISTING) - ENCANA WELL						Out of range

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 33-20 (EXISTING) - ENCANA WELL - ENCAN													Offset Site Error:	0.0 ft
Survey Program: 949-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
14,700.0	8,036.0	8,267.0	8,069.6	112.6	28.7	-91.38	6,612.5	-830.6	424.5	288.5	136.00	3.121		
14,800.0	8,036.0	8,265.7	8,068.3	114.3	28.7	-90.90	6,612.5	-830.6	332.8	195.0	137.77	2.416		
14,900.0	8,036.0	8,264.4	8,067.1	116.1	28.7	-90.42	6,612.5	-830.6	247.6	108.1	139.53	1.775		
15,000.0	8,036.0	8,263.2	8,065.8	117.8	28.7	-89.93	6,612.5	-830.6	178.5	37.2	141.28	1.264	Level 3	
15,097.3	8,036.0	8,261.9	8,064.6	119.5	28.7	-89.46	6,612.5	-830.6	149.7	6.7	142.97	1.047	Level 2, CC	
15,100.0	8,036.0	8,261.9	8,064.6	119.6	28.7	-89.45	6,612.5	-830.6	149.7	6.7	143.02	1.047	Level 2, ES, SF	
15,200.0	8,036.0	8,260.6	8,063.3	121.3	28.7	-88.97	6,612.6	-830.6	181.5	36.8	144.75	1.254	Level 3	
15,300.0	8,036.0	8,259.4	8,062.0	123.0	28.7	-88.49	6,612.6	-830.6	252.0	105.5	146.47	1.720		
15,400.0	8,036.0	8,258.1	8,060.8	124.8	28.7	-88.00	6,612.6	-830.6	337.7	189.5	148.18	2.279		
15,500.0	8,036.0	8,256.9	8,059.5	126.5	28.7	-87.52	6,612.6	-830.6	429.6	279.7	149.88	2.866		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 34-20 (EXISTING) - ENCANA WELL - PLAN O													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
13,300.0	8,036.0	8,163.9	8,059.0	88.4	24.8	-90.00	5,142.2	-952.4	463.0	358.9	104.13	4.447		
13,400.0	8,036.0	8,163.9	8,059.0	90.1	24.8	-90.00	5,142.2	-952.4	397.5	291.6	105.86	3.755		
13,500.0	8,036.0	8,163.9	8,059.0	91.8	24.8	-90.00	5,142.2	-952.4	348.7	241.1	107.59	3.241		
13,600.0	8,036.0	8,163.9	8,059.0	93.6	24.8	-90.00	5,142.2	-952.4	324.3	215.0	109.33	2.966		
13,632.1	8,036.0	8,163.9	8,059.0	94.1	24.8	-90.00	5,142.2	-952.4	322.7	212.8	109.88	2.937	CC, ES, SF	
13,700.0	8,036.0	8,163.9	8,059.0	95.3	24.8	-90.00	5,142.2	-952.4	329.8	218.7	111.06	2.969		
13,800.0	8,036.0	8,163.9	8,059.0	97.0	24.8	-90.00	5,142.2	-952.4	363.8	251.0	112.79	3.225		
13,900.0	8,036.0	8,163.9	8,059.0	98.7	24.8	-90.00	5,142.2	-952.4	419.4	304.9	114.53	3.662		
14,000.0	8,036.0	8,163.9	8,059.0	100.5	24.8	-90.00	5,142.2	-952.4	489.4	373.1	116.27	4.209		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 6-8-20 (EXISTING) - ENCANA WELL - PLAN		Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor					
13,100.0	8,036.0	8,133.1	8,065.0	84.9	21.6	90.00	4,686.1	-124.6	490.9	385.4	105.57	4.651					
13,147.3	8,036.0	8,133.1	8,065.0	85.8	21.6	90.00	4,686.1	-124.6	488.7	382.3	106.39	4.593 CC, ES					
13,200.0	8,036.0	8,133.1	8,065.0	86.7	21.6	90.00	4,686.1	-124.6	491.5	384.2	107.30	4.581 SF					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURVE														Offset Site Error:	0.0 ft
Survey Program: 8615-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	11.89	306.0	64.4	312.9						
100.0	100.0	88.0	88.0	0.2	0.2	11.89	306.0	64.4	312.7	312.4	0.31	1,023.166			
200.0	200.0	188.0	188.0	0.3	0.3	11.89	306.0	64.4	312.7	312.1	0.65	477.644			
300.0	300.0	288.0	288.0	0.5	0.5	11.89	306.0	64.4	312.7	311.7	1.00	311.540			
400.0	400.0	388.0	388.0	0.7	0.7	11.89	306.0	64.4	312.7	311.4	1.35	231.155 CC, ES			
500.0	500.0	488.0	488.0	0.9	0.9	160.59	306.0	64.4	313.5	311.8	1.70	184.238			
600.0	600.0	588.0	588.0	1.0	1.0	160.74	306.0	64.4	316.0	314.0	2.05	154.098			
700.0	699.9	687.9	687.9	1.2	1.2	160.99	306.0	64.4	320.1	317.7	2.40	133.406			
800.0	799.7	787.7	787.7	1.4	1.4	161.32	306.0	64.4	325.9	323.2	2.75	118.562			
900.0	899.4	887.4	887.4	1.6	1.5	161.73	306.0	64.4	333.3	330.2	3.10	107.592			
1,000.0	998.9	986.9	986.9	1.8	1.7	162.20	306.0	64.4	342.5	339.0	3.45	99.325			
1,100.0	1,098.3	1,086.3	1,086.3	2.1	1.9	162.73	306.0	64.4	352.9	349.1	3.80	92.895			
1,200.0	1,197.7	1,185.7	1,185.7	2.3	2.1	163.25	306.0	64.4	363.6	359.4	4.15	87.564			
1,300.0	1,297.1	1,285.1	1,285.1	2.6	2.2	163.74	306.0	64.4	374.2	369.7	4.50	83.078			
1,400.0	1,396.4	1,384.4	1,384.4	2.8	2.4	164.21	306.0	64.4	384.9	380.1	4.86	79.252			
1,500.0	1,495.8	1,483.8	1,483.8	3.1	2.6	164.64	306.0	64.4	395.6	390.4	5.21	75.953			
1,600.0	1,595.2	1,583.2	1,583.2	3.3	2.8	165.06	306.0	64.4	406.4	400.8	5.56	73.079			
1,700.0	1,694.6	1,682.6	1,682.6	3.6	2.9	165.45	306.0	64.4	417.1	411.2	5.91	70.555			
1,800.0	1,794.0	1,782.0	1,782.0	3.8	3.1	165.83	306.0	64.4	427.9	421.6	6.26	68.320			
1,900.0	1,893.3	1,881.3	1,881.3	4.1	3.3	166.18	306.0	64.4	438.7	432.0	6.61	66.328			
2,000.0	1,992.7	1,980.7	1,980.7	4.3	3.5	166.52	306.0	64.4	449.5	442.5	6.96	64.541			
2,100.0	2,092.1	2,080.1	2,080.1	4.6	3.6	166.84	306.0	64.4	460.3	453.0	7.31	62.930			
2,200.0	2,191.5	2,179.5	2,179.5	4.8	3.8	167.15	306.0	64.4	471.1	463.4	7.66	61.470			
2,300.0	2,290.9	2,278.9	2,278.9	5.1	4.0	167.44	306.0	64.4	481.9	473.9	8.01	60.140			
2,400.0	2,390.3	2,378.3	2,378.3	5.4	4.2	167.72	306.0	64.4	492.8	484.4	8.36	58.925 SF			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4B-29H-P168 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.94	0.0	-8.4	8.4					
100.0	100.0	100.0	100.0	0.2	0.2	-89.94	0.0	-8.4	8.4	8.1	0.30	27.669		
200.0	200.0	200.0	200.0	0.3	0.3	-89.94	0.0	-8.4	8.4	7.7	0.65	12.873		
300.0	300.0	300.0	300.0	0.5	0.5	-89.94	0.0	-8.4	8.4	7.4	1.00	8.387 CC, ES		
400.0	400.0	399.9	399.9	0.7	0.7	-93.02	-0.5	-9.1	9.1	7.8	1.35	6.764		
500.0	500.0	499.7	499.7	0.9	0.9	52.30	-1.9	-11.3	10.9	9.2	1.70	6.408		
600.0	600.0	599.5	599.4	1.0	1.0	52.44	-4.4	-14.9	13.1	11.1	2.05	6.401 SF		
700.0	699.9	699.2	698.9	1.2	1.2	54.56	-7.8	-19.9	15.9	13.5	2.42	6.576		
800.0	799.7	798.9	798.3	1.4	1.4	57.65	-12.2	-26.4	19.1	16.4	2.79	6.860		
900.0	899.4	898.5	897.4	1.6	1.7	61.06	-17.5	-34.2	23.0	19.8	3.19	7.209		
1,000.0	998.9	998.1	996.4	1.8	1.9	64.44	-23.9	-43.5	27.5	23.9	3.62	7.590		
1,100.0	1,098.3	1,097.5	1,095.0	2.1	2.2	67.08	-31.1	-54.2	32.8	28.7	4.08	8.030		
1,200.0	1,197.7	1,196.9	1,193.2	2.3	2.5	67.40	-39.4	-66.3	39.3	34.7	4.55	8.643		
1,300.0	1,297.1	1,296.0	1,291.0	2.6	2.8	66.19	-48.5	-79.8	47.1	42.1	5.01	9.399		
1,400.0	1,396.4	1,395.2	1,388.5	2.8	3.1	64.24	-58.6	-94.6	56.1	50.7	5.47	10.270		
1,500.0	1,495.8	1,494.7	1,486.4	3.1	3.5	62.62	-68.9	-109.8	65.5	59.6	5.92	11.065		
1,600.0	1,595.2	1,594.3	1,584.2	3.3	3.8	61.41	-79.2	-124.9	74.9	68.5	6.38	11.750		
1,700.0	1,694.6	1,693.8	1,682.1	3.6	4.2	60.47	-89.5	-140.1	84.4	77.5	6.83	12.344		
1,800.0	1,794.0	1,793.3	1,779.9	3.8	4.5	59.72	-99.8	-155.2	93.8	86.5	7.29	12.865		
1,900.0	1,893.3	1,892.9	1,877.8	4.1	4.9	59.11	-110.1	-170.4	103.3	95.5	7.75	13.324		
2,000.0	1,992.7	1,992.4	1,975.6	4.3	5.2	58.60	-120.4	-185.5	112.8	104.6	8.21	13.732		
2,100.0	2,092.1	2,092.0	2,073.4	4.6	5.6	58.16	-130.7	-200.7	122.3	113.6	8.67	14.096		
2,200.0	2,191.5	2,191.5	2,171.3	4.8	5.9	57.80	-141.0	-215.8	131.8	122.6	9.13	14.423		
2,300.0	2,290.9	2,291.1	2,269.1	5.1	6.3	57.48	-151.3	-231.0	141.3	131.7	9.60	14.718		
2,400.0	2,390.3	2,390.6	2,367.0	5.4	6.7	57.20	-161.6	-246.1	150.8	140.7	10.06	14.986		
2,500.0	2,489.6	2,490.2	2,464.8	5.6	7.0	56.95	-171.9	-261.3	160.3	149.7	10.52	15.230		
2,600.0	2,589.0	2,589.7	2,562.7	5.9	7.4	56.73	-182.2	-276.4	169.8	158.8	10.99	15.454		
2,700.0	2,688.4	2,689.2	2,660.5	6.1	7.8	56.54	-192.5	-291.6	179.3	167.8	11.45	15.659		
2,800.0	2,787.8	2,788.8	2,758.4	6.4	8.1	56.36	-202.8	-306.7	188.8	176.9	11.91	15.848		
2,900.0	2,887.2	2,888.3	2,856.2	6.6	8.5	56.20	-213.1	-321.9	198.3	185.9	12.38	16.023		
3,000.0	2,986.5	2,987.9	2,954.0	6.9	8.8	56.06	-223.3	-337.0	207.8	195.0	12.84	16.184		
3,100.0	3,085.9	3,087.4	3,051.9	7.2	9.2	55.93	-233.6	-352.2	217.3	204.0	13.31	16.335		
3,200.0	3,185.3	3,187.0	3,149.7	7.4	9.6	55.81	-243.9	-367.3	226.9	213.1	13.77	16.475		
3,300.0	3,284.7	3,286.5	3,247.6	7.7	9.9	55.70	-254.2	-382.5	236.4	222.1	14.23	16.606		
3,400.0	3,384.1	3,386.1	3,345.4	7.9	10.3	55.59	-264.5	-397.6	245.9	231.2	14.70	16.729		
3,500.0	3,483.4	3,485.6	3,443.3	8.2	10.7	55.50	-274.8	-412.8	255.4	240.3	15.16	16.844		
3,600.0	3,582.8	3,585.2	3,541.1	8.5	11.0	55.41	-285.1	-427.9	264.9	249.3	15.63	16.952		
3,700.0	3,682.2	3,684.7	3,639.0	8.7	11.4	55.33	-295.4	-443.0	274.5	258.4	16.09	17.053		
3,800.0	3,781.6	3,784.2	3,736.8	9.0	11.8	55.25	-305.7	-458.2	284.0	267.4	16.56	17.149		
3,900.0	3,881.0	3,883.8	3,834.7	9.2	12.1	55.18	-316.0	-473.3	293.5	276.5	17.02	17.240		
4,000.0	3,980.3	3,983.3	3,932.5	9.5	12.5	55.12	-326.3	-488.5	303.0	285.5	17.49	17.326		
4,100.0	4,079.7	4,082.9	4,030.3	9.8	12.9	55.05	-336.6	-503.6	312.5	294.6	17.96	17.407		
4,200.0	4,179.1	4,182.4	4,128.2	10.0	13.2	54.99	-346.9	-518.8	322.1	303.6	18.42	17.484		
4,300.0	4,278.5	4,282.0	4,226.0	10.3	13.6	54.94	-357.2	-533.9	331.6	312.7	18.89	17.557		
4,400.0	4,377.9	4,381.5	4,323.9	10.5	14.0	54.89	-367.5	-549.1	341.1	321.8	19.35	17.627		
4,500.0	4,477.2	4,481.1	4,421.7	10.8	14.3	54.84	-377.8	-564.2	350.6	330.8	19.82	17.693		
4,600.0	4,576.6	4,580.6	4,519.6	11.1	14.7	54.79	-388.1	-579.4	360.2	339.9	20.28	17.757		
4,700.0	4,676.0	4,680.1	4,617.4	11.3	15.1	54.75	-398.4	-594.5	369.7	348.9	20.75	17.817		
4,800.0	4,775.4	4,779.7	4,715.3	11.6	15.4	54.70	-408.7	-609.7	379.2	358.0	21.21	17.875		
4,900.0	4,874.8	4,879.2	4,813.1	11.8	15.8	54.66	-419.0	-624.8	388.7	367.1	21.68	17.930		
5,000.0	4,974.2	4,978.8	4,911.0	12.1	16.2	54.62	-429.3	-640.0	398.3	376.1	22.15	17.983		
5,100.0	5,073.5	5,078.3	5,008.8	12.4	16.5	54.59	-439.6	-655.1	407.8	385.2	22.61	18.034		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4B-29H-P168 - Hz - Plan #1		Offset Site Error:		0.0 ft
Survey Program:													0-MWD		Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore	Centre	Between	Between	Total	Separation	Warning				
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Uncertainty	Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	Axis						
5,200.0	5,172.9	5,177.9	5,106.6	12.6	16.9	54.55	-449.9	-670.3	417.3	394.2	23.08	18.083					
5,300.0	5,272.3	5,277.4	5,204.5	12.9	17.2	54.52	-460.2	-685.4	426.8	403.3	23.54	18.129					
5,400.0	5,371.7	5,377.0	5,302.3	13.1	17.6	54.49	-470.5	-700.6	436.4	412.4	24.01	18.174					
5,500.0	5,471.1	5,476.5	5,400.2	13.4	18.0	54.46	-480.8	-715.7	445.9	421.4	24.48	18.217					
5,600.0	5,570.4	5,576.1	5,498.0	13.7	18.3	54.43	-491.1	-730.9	455.4	430.5	24.94	18.259					
5,700.0	5,669.8	5,675.6	5,595.9	13.9	18.7	54.40	-501.4	-746.0	465.0	439.5	25.41	18.299					
5,800.0	5,769.2	5,775.1	5,693.7	14.2	19.1	54.37	-511.7	-761.2	474.5	448.6	25.87	18.337					
5,900.0	5,868.6	5,874.7	5,791.6	14.4	19.4	54.35	-522.0	-776.3	484.0	457.7	26.34	18.375					
6,000.0	5,968.0	5,974.2	5,889.4	14.7	19.8	54.32	-532.3	-791.5	493.5	466.7	26.81	18.411					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4D-29H-P168 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	11.2	11.2					
100.0	100.0	100.0	100.0	0.2	0.2	90.04	0.0	11.2	11.2	10.9	0.30	36.891		
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	11.2	11.2	10.6	0.65	17.163		
300.0	300.0	300.0	300.0	0.5	0.5	90.04	0.0	11.2	11.2	10.2	1.00	11.183		
400.0	400.0	400.0	400.0	0.7	0.7	90.04	0.0	11.2	11.2	9.9	1.35	8.293 CC, ES		
500.0	500.0	500.0	500.0	0.9	0.8	-124.96	0.0	11.2	11.7	10.0	1.70	6.870		
600.0	600.0	600.1	600.1	1.0	1.0	-131.32	-0.8	10.8	12.8	10.7	2.05	6.223		
700.0	699.9	700.3	700.2	1.2	1.2	-136.47	-3.1	9.4	14.0	11.6	2.41	5.815		
800.0	799.7	800.4	800.3	1.4	1.4	-140.64	-6.9	7.2	15.3	12.6	2.76	5.539		
900.0	899.4	900.6	900.3	1.6	1.6	-143.99	-12.2	4.1	16.7	13.6	3.13	5.341		
1,000.0	998.9	1,000.7	1,000.1	1.8	1.8	-147.38	-18.7	0.2	18.5	15.0	3.49	5.289 SF		
1,100.0	1,098.3	1,100.6	1,099.7	2.1	2.0	-151.91	-25.3	-3.6	21.4	17.6	3.85	5.569		
1,200.0	1,197.7	1,200.6	1,199.4	2.3	2.2	-155.45	-31.9	-7.5	24.6	20.4	4.20	5.856		
1,300.0	1,297.1	1,300.5	1,299.0	2.6	2.4	-158.17	-38.5	-11.3	27.9	23.3	4.56	6.118		
1,400.0	1,396.4	1,400.5	1,398.7	2.8	2.6	-160.32	-45.1	-15.2	31.2	26.3	4.91	6.353		
1,500.0	1,495.8	1,500.4	1,498.3	3.1	2.8	-162.06	-51.7	-19.0	34.5	29.3	5.26	6.565		
1,600.0	1,595.2	1,600.3	1,598.0	3.3	3.0	-163.48	-58.3	-22.9	37.9	32.3	5.61	6.756		
1,700.0	1,694.6	1,700.3	1,697.6	3.6	3.3	-164.68	-64.9	-26.8	41.3	35.3	5.96	6.928		
1,800.0	1,794.0	1,800.2	1,797.3	3.8	3.5	-165.69	-71.5	-30.6	44.7	38.4	6.31	7.084		
1,900.0	1,893.3	1,900.2	1,896.9	4.1	3.7	-166.56	-78.1	-34.5	48.1	41.4	6.66	7.225		
2,000.0	1,992.7	2,000.1	1,996.6	4.3	3.9	-167.32	-84.7	-38.3	51.5	44.5	7.00	7.354		
2,100.0	2,092.1	2,100.0	2,096.2	4.6	4.1	-167.98	-91.3	-42.2	54.9	47.6	7.35	7.471		
2,200.0	2,191.5	2,200.0	2,195.8	4.8	4.3	-168.56	-97.9	-46.1	58.4	50.7	7.70	7.579		
2,300.0	2,290.9	2,299.9	2,295.5	5.1	4.5	-169.08	-104.5	-49.9	61.8	53.8	8.05	7.678		
2,400.0	2,390.3	2,399.9	2,395.1	5.4	4.8	-169.54	-111.0	-53.8	65.3	56.9	8.40	7.769		
2,500.0	2,489.6	2,499.8	2,494.8	5.6	5.0	-169.95	-117.6	-57.6	68.7	60.0	8.75	7.854		
2,600.0	2,589.0	2,599.7	2,594.4	5.9	5.2	-170.33	-124.2	-61.5	72.2	63.1	9.10	7.932		
2,700.0	2,688.4	2,699.7	2,694.1	6.1	5.4	-170.67	-130.8	-65.3	75.6	66.2	9.45	8.005		
2,800.0	2,787.8	2,799.6	2,793.7	6.4	5.6	-170.99	-137.4	-69.2	79.1	69.3	9.80	8.073		
2,900.0	2,887.2	2,899.5	2,893.4	6.6	5.9	-171.27	-144.0	-73.1	82.5	72.4	10.14	8.136		
3,000.0	2,986.5	2,999.5	2,993.0	6.9	6.1	-171.54	-150.6	-76.9	86.0	75.5	10.49	8.196		
3,100.0	3,085.9	3,099.4	3,092.7	7.2	6.3	-171.78	-157.2	-80.8	89.5	78.6	10.84	8.251		
3,200.0	3,185.3	3,199.4	3,192.3	7.4	6.5	-172.00	-163.8	-84.6	92.9	81.7	11.19	8.304		
3,300.0	3,284.7	3,299.3	3,292.0	7.7	6.7	-172.21	-170.4	-88.5	96.4	84.9	11.54	8.353		
3,400.0	3,384.1	3,399.2	3,391.6	7.9	6.9	-172.40	-177.0	-92.4	99.9	88.0	11.89	8.399		
3,500.0	3,483.4	3,499.2	3,491.3	8.2	7.2	-172.59	-183.6	-96.2	103.3	91.1	12.24	8.443		
3,600.0	3,582.8	3,599.1	3,590.9	8.5	7.4	-172.76	-190.2	-100.1	106.8	94.2	12.59	8.485		
3,700.0	3,682.2	3,699.1	3,690.5	8.7	7.6	-172.91	-196.8	-103.9	110.3	97.3	12.94	8.524		
3,800.0	3,781.6	3,799.0	3,790.2	9.0	7.8	-173.06	-203.4	-107.8	113.8	100.5	13.29	8.561		
3,900.0	3,881.0	3,898.9	3,889.8	9.2	8.0	-173.20	-210.0	-111.6	117.2	103.6	13.64	8.597		
4,000.0	3,980.3	3,998.9	3,989.5	9.5	8.3	-173.33	-216.6	-115.5	120.7	106.7	13.99	8.631		
4,100.0	4,079.7	4,098.8	4,089.1	9.8	8.5	-173.46	-223.1	-119.4	124.2	109.8	14.33	8.663		
4,200.0	4,179.1	4,198.8	4,188.8	10.0	8.7	-173.58	-229.7	-123.2	127.6	113.0	14.68	8.693		
4,300.0	4,278.5	4,298.7	4,288.4	10.3	8.9	-173.69	-236.3	-127.1	131.1	116.1	15.03	8.722		
4,400.0	4,377.9	4,398.6	4,388.1	10.5	9.1	-173.79	-242.9	-130.9	134.6	119.2	15.38	8.750		
4,500.0	4,477.2	4,498.6	4,487.7	10.8	9.4	-173.89	-249.5	-134.8	138.1	122.3	15.73	8.777		
4,600.0	4,576.6	4,598.5	4,587.4	11.1	9.6	-173.99	-256.1	-138.7	141.6	125.5	16.08	8.803		
4,700.0	4,676.0	4,698.5	4,687.0	11.3	9.8	-174.08	-262.7	-142.5	145.0	128.6	16.43	8.827		
4,800.0	4,775.4	4,798.4	4,786.7	11.6	10.0	-174.17	-269.3	-146.4	148.5	131.7	16.78	8.850		
4,900.0	4,874.8	4,898.3	4,886.3	11.8	10.2	-174.25	-275.9	-150.2	152.0	134.9	17.13	8.873		
5,000.0	4,974.2	4,998.3	4,986.0	12.1	10.4	-174.33	-282.5	-154.1	155.5	138.0	17.48	8.895		
5,100.0	5,073.5	5,098.2	5,085.6	12.4	10.7	-174.41	-289.1	-158.0	158.9	141.1	17.83	8.915		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4D-29H-P168 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,200.0	5,172.9	5,198.2	5,185.3	12.6	10.9	-174.48	-295.7	-161.8	162.4	144.2	18.18	8.935		
5,300.0	5,272.3	5,298.1	5,284.9	12.9	11.1	-174.55	-302.3	-165.7	165.9	147.4	18.53	8.955		
5,400.0	5,371.7	5,398.0	5,384.5	13.1	11.3	-174.61	-308.9	-169.5	169.4	150.5	18.88	8.973		
5,500.0	5,471.1	5,498.0	5,484.2	13.4	11.5	-174.68	-315.5	-173.4	172.9	153.6	19.22	8.991		
5,600.0	5,570.4	5,597.9	5,583.8	13.7	11.8	-174.74	-322.1	-177.2	176.3	156.8	19.57	9.008		
5,700.0	5,669.8	5,697.8	5,683.5	13.9	12.0	-174.80	-328.6	-181.1	179.8	159.9	19.92	9.025		
5,800.0	5,769.2	5,797.8	5,783.1	14.2	12.2	-174.85	-335.2	-185.0	183.3	163.0	20.27	9.041		
5,900.0	5,868.6	5,897.7	5,882.8	14.4	12.4	-174.91	-341.8	-188.8	186.8	166.1	20.62	9.057		
6,000.0	5,968.0	5,997.7	5,982.4	14.7	12.6	-174.96	-348.4	-192.7	190.3	169.3	20.97	9.072		
6,100.0	6,067.3	6,097.6	6,082.1	15.0	12.9	-175.01	-355.0	-196.5	193.7	172.4	21.32	9.086		
6,200.0	6,166.7	6,197.5	6,181.7	15.2	13.1	-175.06	-361.6	-200.4	197.2	175.5	21.67	9.100		
6,300.0	6,266.1	6,297.5	6,281.4	15.5	13.3	-175.11	-368.2	-204.3	200.7	178.7	22.02	9.114		
6,400.0	6,365.5	6,397.4	6,381.0	15.8	13.5	-175.15	-374.8	-208.1	204.2	181.8	22.37	9.127		
6,500.0	6,464.9	6,497.4	6,480.7	16.0	13.7	-175.20	-381.4	-212.0	207.7	184.9	22.72	9.140		
6,600.0	6,564.2	6,597.3	6,580.3	16.3	14.0	-175.24	-388.0	-215.8	211.1	188.1	23.07	9.152		
6,700.0	6,663.6	6,697.2	6,680.0	16.5	14.2	-175.28	-394.6	-219.7	214.6	191.2	23.42	9.165		
6,800.0	6,763.0	6,797.2	6,779.6	16.8	14.4	-175.32	-401.2	-223.5	218.1	194.3	23.77	9.176		
6,900.0	6,862.4	6,897.1	6,879.2	17.1	14.6	-175.36	-407.8	-227.4	221.6	197.5	24.12	9.188		
7,000.0	6,961.8	6,997.1	6,978.9	17.3	14.8	-175.40	-414.4	-231.3	225.1	200.6	24.47	9.199		
7,100.0	7,061.2	7,075.2	7,056.9	17.6	14.9	-175.99	-415.7	-234.3	232.7	207.9	24.76	9.397		
7,200.0	7,160.5	7,150.0	7,131.1	17.8	15.0	-177.88	-407.0	-237.3	250.9	225.9	25.03	10.026		
7,300.0	7,259.9	7,215.3	7,194.5	18.1	14.9	179.72	-391.5	-240.0	279.8	254.4	25.31	11.055		
7,400.0	7,359.3	7,276.9	7,252.2	18.4	14.9	177.11	-370.3	-242.5	318.8	293.1	25.63	12.437		
7,500.0	7,458.8	7,332.7	7,302.2	18.6	14.8	125.68	-345.8	-244.7	365.5	339.5	26.03	14.043		
7,600.0	7,558.2	7,387.0	7,348.4	18.6	14.6	44.01	-317.3	-246.8	408.9	382.7	26.15	15.634		
7,700.0	7,654.7	7,450.0	7,398.3	18.5	14.5	31.43	-279.0	-249.2	446.2	420.4	25.80	17.296		
7,800.0	7,745.4	7,500.0	7,434.6	18.2	14.4	26.53	-244.7	-251.0	476.6	451.7	24.91	19.130		
7,900.0	7,827.6	7,550.0	7,467.8	17.9	14.3	23.90	-207.4	-252.7	499.8	476.2	23.64	21.144		
8,000.0	8,036.0	7,868.5	7,590.8	16.8	14.6	23.34	81.8	-260.6	487.5	468.1	19.43	25.083		
8,600.0	8,036.0	7,924.0	7,594.8	17.2	14.9	23.66	137.1	-261.3	481.7	461.7	19.97	24.121		
8,619.4	8,036.0	7,937.5	7,595.0	17.3	14.9	23.70	150.6	-261.5	481.6	461.5	20.09	23.975		
8,700.0	8,036.0	8,013.3	7,595.0	17.7	15.4	23.90	226.4	-262.3	482.4	461.7	20.68	23.322		
8,800.0	8,036.0	8,113.3	7,595.0	18.4	16.1	24.17	326.4	-263.3	483.4	461.9	21.52	22.459		
8,900.0	8,036.0	8,213.3	7,595.0	19.2	17.0	24.43	426.4	-264.4	484.4	461.9	22.44	21.585		
9,000.0	8,036.0	8,313.2	7,595.0	20.1	18.0	24.69	526.3	-265.4	485.4	462.0	23.44	20.712		
9,100.0	8,036.0	8,413.2	7,595.0	21.2	19.2	24.95	626.3	-266.4	486.4	461.9	24.50	19.853		
9,200.0	8,036.0	8,513.2	7,595.0	22.3	20.4	25.21	726.3	-267.5	487.5	461.8	25.64	19.014		
9,300.0	8,036.0	8,613.1	7,595.0	23.5	21.7	25.47	826.2	-268.5	488.5	461.7	26.84	18.204		
9,400.0	8,036.0	8,713.1	7,595.0	24.8	23.0	25.73	926.2	-269.6	489.6	461.5	28.10	17.425		
9,500.0	8,036.0	8,813.1	7,595.0	26.1	24.4	25.99	1,026.2	-270.6	490.6	461.2	29.41	16.681		
9,600.0	8,036.0	8,913.1	7,595.0	27.5	25.8	26.24	1,126.1	-271.7	491.7	460.9	30.78	15.973		
9,700.0	8,036.0	9,013.0	7,595.0	28.9	27.3	26.50	1,226.1	-272.7	492.8	460.6	32.21	15.301		
9,800.0	8,036.0	9,113.0	7,595.0	30.3	28.8	26.75	1,326.0	-273.8	493.9	460.2	33.68	14.665		
9,900.0	8,036.0	9,213.0	7,595.0	31.8	30.4	27.00	1,426.0	-274.8	495.0	459.8	35.20	14.064		
10,000.0	8,036.0	9,312.9	7,595.0	33.3	31.9	27.26	1,526.0	-275.9	496.1	459.4	36.76	13.496		
10,100.0	8,036.0	9,412.9	7,595.0	34.9	33.5	27.51	1,625.9	-276.9	497.2	458.9	38.36	12.961		
10,200.0	8,036.0	9,512.9	7,595.0	36.4	35.1	27.75	1,725.9	-278.0	498.4	458.4	40.01	12.457		
10,300.0	8,036.0	9,612.8	7,595.0	38.0	36.7	28.00	1,825.9	-279.0	499.5	457.8	41.69	11.981		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4E-29H-P168 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program:		0-MWD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	19.6	19.6					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	19.6	19.6	19.3	0.30	64.560		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	19.6	19.6	19.0	0.65	30.036		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	19.6	19.6	18.6	1.00	19.570		
400.0	400.0	400.0	400.0	0.7	0.7	90.05	0.0	19.6	19.6	18.3	1.35	14.513 CC, ES		
500.0	500.0	500.0	500.0	0.9	0.8	-123.42	0.0	19.6	20.1	18.4	1.70	11.806		
600.0	600.0	600.0	600.0	1.0	1.0	-129.21	0.0	19.6	21.6	19.6	2.05	10.543		
700.0	699.9	699.9	699.9	1.2	1.2	-137.07	0.0	19.6	24.6	22.2	2.40	10.243		
800.0	799.7	799.7	799.7	1.4	1.4	-145.18	0.0	19.6	29.4	26.6	2.76	10.665		
900.0	899.4	899.4	899.4	1.6	1.5	-152.27	0.0	19.6	36.1	33.0	3.10	11.629		
1,000.0	998.9	998.9	998.9	1.8	1.7	-157.94	0.0	19.6	44.8	41.4	3.45	12.984		
1,100.0	1,098.3	1,098.3	1,098.3	2.1	1.9	-162.22	0.0	19.6	55.2	51.4	3.80	14.522		
1,200.0	1,197.7	1,197.7	1,197.7	2.3	2.1	-165.17	0.0	19.6	65.8	61.7	4.15	15.881		
1,300.0	1,297.1	1,297.1	1,297.1	2.6	2.2	-167.30	0.0	19.6	76.6	72.1	4.49	17.058		
1,400.0	1,396.4	1,396.4	1,396.4	2.8	2.4	-168.90	0.0	19.6	87.5	82.7	4.84	18.082		
1,500.0	1,495.8	1,495.8	1,495.8	3.1	2.6	-170.14	0.0	19.6	98.4	93.2	5.19	18.980		
1,600.0	1,595.2	1,595.2	1,595.2	3.3	2.8	-171.14	0.0	19.6	109.4	103.9	5.53	19.772		
1,700.0	1,694.6	1,694.6	1,694.6	3.6	2.9	-171.95	0.0	19.6	120.4	114.5	5.88	20.474		
1,800.0	1,794.0	1,794.0	1,794.0	3.8	3.1	-172.63	0.0	19.6	131.4	125.2	6.23	21.102		
1,900.0	1,893.3	1,893.3	1,893.3	4.1	3.3	-173.20	0.0	19.6	142.4	135.9	6.57	21.665		
2,000.0	1,992.7	1,992.7	1,992.7	4.3	3.5	-173.69	0.0	19.6	153.5	146.5	6.92	22.174		
2,100.0	2,092.1	2,093.6	2,093.6	4.6	3.6	-173.90	-0.7	19.9	164.1	156.8	7.27	22.566		
2,200.0	2,191.5	2,194.8	2,194.7	4.8	3.8	-173.60	-3.2	20.7	173.8	166.1	7.63	22.785		
2,300.0	2,290.9	2,296.1	2,296.0	5.1	4.0	-172.85	-7.3	22.1	182.5	174.5	7.98	22.853		
2,400.0	2,390.3	2,397.5	2,397.2	5.4	4.2	-171.72	-13.1	24.0	190.3	181.9	8.35	22.787		
2,500.0	2,489.6	2,498.9	2,498.3	5.6	4.4	-170.22	-20.6	26.6	197.2	188.5	8.72	22.607		
2,600.0	2,589.0	2,600.2	2,599.1	5.9	4.6	-168.39	-29.8	29.7	203.5	194.4	9.11	22.326		
2,700.0	2,688.4	2,701.4	2,699.7	6.1	4.8	-166.24	-40.6	33.4	209.1	199.6	9.52	21.961		
2,800.0	2,787.8	2,801.8	2,799.2	6.4	5.0	-163.84	-52.9	37.6	214.4	204.5	9.95	21.545		
2,900.0	2,887.2	2,901.2	2,897.8	6.6	5.2	-161.51	-65.3	41.8	220.0	209.6	10.40	21.159		
3,000.0	2,986.5	3,000.7	2,996.4	6.9	5.4	-159.30	-77.6	46.0	225.9	215.0	10.85	20.810		
3,100.0	3,085.9	3,100.1	3,095.0	7.2	5.7	-157.20	-90.0	50.2	232.1	220.8	11.32	20.495		
3,200.0	3,185.3	3,199.6	3,193.5	7.4	5.9	-155.22	-102.4	54.5	238.6	226.8	11.80	20.212		
3,300.0	3,284.7	3,299.1	3,292.1	7.7	6.2	-153.34	-114.8	58.7	245.4	233.1	12.29	19.957		
3,400.0	3,384.1	3,398.5	3,390.7	7.9	6.4	-151.56	-127.2	62.9	252.4	239.6	12.79	19.728		
3,500.0	3,483.4	3,498.0	3,489.3	8.2	6.6	-149.88	-139.6	67.1	259.7	246.4	13.30	19.524		
3,600.0	3,582.8	3,597.4	3,587.9	8.5	6.9	-148.30	-152.0	71.3	267.1	253.3	13.81	19.341		
3,700.0	3,682.2	3,696.9	3,686.5	8.7	7.2	-146.80	-164.3	75.5	274.8	260.5	14.33	19.179		
3,800.0	3,781.6	3,796.3	3,785.1	9.0	7.4	-145.38	-176.7	79.8	282.6	267.8	14.85	19.035		
3,900.0	3,881.0	3,895.8	3,883.7	9.2	7.7	-144.04	-189.1	84.0	290.6	275.3	15.37	18.907		
4,000.0	3,980.3	3,995.2	3,982.3	9.5	7.9	-142.77	-201.5	88.2	298.8	282.9	15.90	18.794		
4,100.0	4,079.7	4,094.7	4,080.9	9.8	8.2	-141.57	-213.9	92.4	307.1	290.6	16.43	18.694		
4,200.0	4,179.1	4,194.1	4,179.4	10.0	8.5	-140.43	-226.3	96.6	315.5	298.5	16.96	18.607		
4,300.0	4,278.5	4,293.6	4,278.0	10.3	8.7	-139.36	-238.7	100.8	324.0	306.5	17.49	18.530		
4,400.0	4,377.9	4,393.0	4,376.6	10.5	9.0	-138.33	-251.0	105.1	332.7	314.7	18.02	18.462		
4,500.0	4,477.2	4,492.5	4,475.2	10.8	9.3	-137.36	-263.4	109.3	341.4	322.9	18.55	18.403		
4,600.0	4,576.6	4,591.9	4,573.8	11.1	9.5	-136.44	-275.8	113.5	350.3	331.2	19.09	18.352		
4,700.0	4,676.0	4,691.4	4,672.4	11.3	9.8	-135.56	-288.2	117.7	359.2	339.6	19.62	18.308		
4,800.0	4,775.4	4,790.9	4,771.0	11.6	10.1	-134.73	-300.6	121.9	368.2	348.0	20.15	18.270		
4,900.0	4,874.8	4,890.3	4,869.6	11.8	10.3	-133.94	-313.0	126.1	377.3	356.6	20.69	18.238		
5,000.0	4,974.2	4,989.8	4,968.2	12.1	10.6	-133.18	-325.4	130.4	386.4	365.2	21.22	18.211		
5,100.0	5,073.5	5,089.2	5,066.7	12.4	10.9	-132.46	-337.8	134.6	395.6	373.9	21.75	18.188		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4E-29H-P168 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,172.9	5,188.7	5,165.3	12.6	11.2	-131.77	-350.1	138.8	404.9	382.6	22.28	18.169		
5,300.0	5,272.3	5,288.1	5,263.9	12.9	11.4	-131.11	-362.5	143.0	414.2	391.4	22.82	18.154		
5,400.0	5,371.7	5,387.6	5,362.5	13.1	11.7	-130.48	-374.9	147.2	423.6	400.3	23.35	18.142		
5,500.0	5,471.1	5,487.0	5,461.1	13.4	12.0	-129.88	-387.3	151.4	433.0	409.1	23.88	18.133		
5,600.0	5,570.4	5,586.5	5,559.7	13.7	12.3	-129.30	-399.7	155.7	442.5	418.1	24.41	18.127		
5,700.0	5,669.8	5,685.9	5,658.3	13.9	12.6	-128.75	-412.1	159.9	452.0	427.1	24.94	18.122		
5,800.0	5,769.2	5,785.4	5,756.9	14.2	12.8	-128.22	-424.5	164.1	461.6	436.1	25.47	18.120		
5,900.0	5,868.6	5,884.8	5,855.5	14.4	13.1	-127.71	-436.8	168.3	471.2	445.2	26.00	18.120		
6,000.0	5,968.0	5,984.3	5,954.0	14.7	13.4	-127.23	-449.2	172.5	480.8	454.3	26.53	18.121		
6,100.0	6,067.3	6,083.8	6,052.6	15.0	13.7	-126.76	-461.6	176.7	490.4	463.4	27.06	18.124		
11,400.0	8,036.0	11,469.1	8,036.0	56.0	56.4	90.00	2,981.8	-60.7	494.8	383.0	111.80	4.426		
11,500.0	8,036.0	11,561.0	8,036.0	57.7	57.9	90.00	3,073.1	-70.9	487.1	372.1	115.05	4.234		
11,600.0	8,036.0	11,653.0	8,036.0	59.3	59.5	90.00	3,164.7	-79.7	481.1	362.8	118.32	4.066		
11,700.0	8,036.0	11,745.2	8,036.0	61.0	61.1	90.00	3,256.6	-87.0	476.6	355.0	121.59	3.920		
11,800.0	8,036.0	11,837.5	8,036.0	62.7	62.6	90.00	3,348.7	-92.9	473.8	348.9	124.87	3.794		
11,900.0	8,036.0	11,929.9	8,036.0	64.4	64.2	90.00	3,441.0	-97.3	472.5	344.4	128.15	3.687		
11,927.1	8,036.0	11,954.9	8,036.0	64.9	64.6	90.00	3,466.0	-98.2	472.5	343.4	129.04	3.661		
12,000.0	8,036.0	12,022.2	8,036.0	66.1	65.8	90.00	3,533.3	-100.1	472.9	341.4	131.44	3.598		
12,100.0	8,036.0	12,114.6	8,036.0	67.8	67.4	90.00	3,625.7	-101.5	474.9	340.1	134.72	3.525		
12,200.0	8,036.0	12,206.9	8,036.0	69.5	68.9	90.00	3,717.9	-101.4	478.5	340.4	138.01	3.467		
12,300.0	8,036.0	12,300.0	8,036.0	71.2	70.5	90.00	3,811.0	-99.8	483.7	342.3	141.32	3.423		
12,400.0	8,036.0	12,390.9	8,036.0	72.9	72.1	90.00	3,901.9	-96.8	490.5	345.9	144.59	3.392		
12,500.0	8,036.0	12,485.1	8,036.0	74.6	73.7	90.00	3,996.0	-92.3	498.8	350.9	147.92	3.372 SF		

Anticollision Report

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Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4F-29H-P168 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	30.8	30.8					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	30.8	30.8	30.5	0.30	101.451		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	30.8	30.8	30.2	0.65	47.199		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	30.8	30.8	29.8	1.00	30.754		
400.0	400.0	400.0	400.0	0.7	0.7	90.05	0.0	30.8	30.8	29.5	1.35	22.807 CC, ES		
500.0	500.0	500.0	500.0	0.9	0.8	-122.66	0.0	30.8	31.3	29.6	1.70	18.392		
600.0	600.0	599.7	599.7	1.0	1.0	-125.16	-0.8	31.3	33.2	31.1	2.05	16.169		
700.0	699.9	699.3	699.3	1.2	1.2	-127.11	-2.9	32.7	37.0	34.5	2.41	15.349 SF		
800.0	799.7	798.9	798.7	1.4	1.4	-128.39	-6.6	35.0	42.6	39.8	2.77	15.361		
900.0	899.4	898.2	897.9	1.6	1.6	-129.09	-11.7	38.3	50.1	46.9	3.15	15.882		
1,000.0	998.9	997.4	996.8	1.8	1.8	-129.35	-18.2	42.4	59.4	55.9	3.55	16.716		
1,100.0	1,098.3	1,096.3	1,095.3	2.1	2.0	-129.17	-26.2	47.5	70.3	66.4	3.97	17.694		
1,200.0	1,197.7	1,195.1	1,193.4	2.3	2.2	-128.04	-35.5	53.5	82.0	77.6	4.42	18.580		
1,300.0	1,297.1	1,294.2	1,291.7	2.6	2.5	-126.55	-45.9	60.1	94.3	89.4	4.87	19.366		
1,400.0	1,396.4	1,393.4	1,390.2	2.8	2.7	-125.39	-56.3	66.7	106.6	101.3	5.33	20.003		
1,500.0	1,495.8	1,492.6	1,488.6	3.1	3.0	-124.47	-66.7	73.4	119.0	113.2	5.80	20.528		
1,600.0	1,595.2	1,591.8	1,587.1	3.3	3.2	-123.73	-77.1	80.0	131.4	125.1	6.27	20.966		
1,700.0	1,694.6	1,691.1	1,685.5	3.6	3.5	-123.11	-87.4	86.7	143.8	137.0	6.74	21.336		
1,800.0	1,794.0	1,790.3	1,784.0	3.8	3.8	-122.59	-97.8	93.3	156.2	149.0	7.21	21.653		
1,900.0	1,893.3	1,889.5	1,882.4	4.1	4.0	-122.15	-108.2	99.9	168.6	160.9	7.69	21.927		
2,000.0	1,992.7	1,988.7	1,980.9	4.3	4.3	-121.77	-118.6	106.6	181.1	172.9	8.17	22.166		
2,100.0	2,092.1	2,087.9	2,079.3	4.6	4.6	-121.43	-129.0	113.2	193.5	184.9	8.65	22.376		
2,200.0	2,191.5	2,187.1	2,177.7	4.8	4.8	-121.14	-139.4	119.9	205.9	196.8	9.13	22.561		
2,300.0	2,290.9	2,286.4	2,276.2	5.1	5.1	-120.88	-149.8	126.5	218.4	208.8	9.61	22.727		
2,400.0	2,390.3	2,385.6	2,374.6	5.4	5.4	-120.65	-160.2	133.2	230.9	220.8	10.09	22.876		
2,500.0	2,489.6	2,484.8	2,473.1	5.6	5.6	-120.44	-170.6	139.8	243.3	232.7	10.57	23.009		
2,600.0	2,589.0	2,584.0	2,571.5	5.9	5.9	-120.25	-181.0	146.4	255.8	244.7	11.06	23.131		
2,700.0	2,688.4	2,683.2	2,670.0	6.1	6.2	-120.08	-191.4	153.1	268.2	256.7	11.54	23.241		
2,800.0	2,787.8	2,782.4	2,768.4	6.4	6.5	-119.93	-201.8	159.7	280.7	268.7	12.03	23.342		
2,900.0	2,887.2	2,881.7	2,866.9	6.6	6.7	-119.79	-212.2	166.4	293.2	280.7	12.51	23.434		
3,000.0	2,986.5	2,980.9	2,965.3	6.9	7.0	-119.66	-222.6	173.0	305.6	292.7	13.00	23.519		
3,100.0	3,085.9	3,080.1	3,063.8	7.2	7.3	-119.54	-233.0	179.6	318.1	304.6	13.48	23.597		
3,200.0	3,185.3	3,179.3	3,162.2	7.4	7.6	-119.43	-243.4	186.3	330.6	316.6	13.97	23.670		
3,300.0	3,284.7	3,278.5	3,260.7	7.7	7.8	-119.32	-253.8	192.9	343.1	328.6	14.45	23.738		
3,400.0	3,384.1	3,377.7	3,359.1	7.9	8.1	-119.23	-264.2	199.6	355.5	340.6	14.94	23.800		
3,500.0	3,483.4	3,477.0	3,457.6	8.2	8.4	-119.14	-274.6	206.2	368.0	352.6	15.42	23.859		
3,600.0	3,582.8	3,576.2	3,556.0	8.5	8.7	-119.06	-285.0	212.8	380.5	364.6	15.91	23.914		
3,700.0	3,682.2	3,675.4	3,654.5	8.7	8.9	-118.98	-295.3	219.5	393.0	376.6	16.40	23.965		
3,800.0	3,781.6	3,774.6	3,752.9	9.0	9.2	-118.90	-305.7	226.1	405.5	388.6	16.88	24.013		
3,900.0	3,881.0	3,873.8	3,851.4	9.2	9.5	-118.84	-316.1	232.8	417.9	400.6	17.37	24.059		
4,000.0	3,980.3	3,973.1	3,949.8	9.5	9.8	-118.77	-326.5	239.4	430.4	412.6	17.86	24.101		
4,100.0	4,079.7	4,072.3	4,048.2	9.8	10.0	-118.71	-336.9	246.1	442.9	424.5	18.35	24.142		
4,200.0	4,179.1	4,171.5	4,146.7	10.0	10.3	-118.65	-347.3	252.7	455.4	436.5	18.83	24.180		
4,300.0	4,278.5	4,270.7	4,245.1	10.3	10.6	-118.60	-357.7	259.3	467.9	448.5	19.32	24.216		
4,400.0	4,377.9	4,369.9	4,343.6	10.5	10.9	-118.54	-368.1	266.0	480.3	460.5	19.81	24.250		
4,500.0	4,477.2	4,469.1	4,442.0	10.8	11.1	-118.50	-378.5	272.6	492.8	472.5	20.29	24.283		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4G-29H-P168 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	39.2	39.2					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	39.2	39.2	38.9	0.30	129.120		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	39.2	39.2	38.6	0.65	60.072		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	39.2	39.2	38.2	1.00	39.141		
400.0	400.0	400.0	400.0	0.7	0.7	90.05	0.0	39.2	39.2	37.9	1.35	29.027 CC, ES		
500.0	500.0	499.5	499.5	0.9	0.8	-121.56	-0.6	39.9	40.3	38.6	1.70	23.734		
600.0	600.0	598.8	598.8	1.0	1.0	-122.28	-2.2	41.9	43.7	41.7	2.05	21.313		
700.0	699.9	698.1	697.9	1.2	1.2	-123.26	-4.9	45.2	49.4	47.0	2.41	20.486 SF		
800.0	799.7	797.1	796.7	1.4	1.4	-124.29	-8.7	49.9	57.3	54.5	2.78	20.617		
900.0	899.4	895.8	895.1	1.6	1.6	-125.25	-13.6	55.8	67.5	64.3	3.16	21.343		
1,000.0	998.9	994.1	993.0	1.8	1.8	-126.08	-19.5	63.0	79.9	76.3	3.56	22.440		
1,100.0	1,098.3	1,091.9	1,090.3	2.1	2.1	-126.67	-26.5	71.5	94.4	90.4	3.98	23.732		
1,200.0	1,197.7	1,189.5	1,187.0	2.3	2.3	-126.56	-34.4	81.2	110.2	105.7	4.41	24.985		
1,300.0	1,297.1	1,287.0	1,283.4	2.6	2.6	-125.96	-43.4	92.2	127.1	122.2	4.85	26.192		
1,400.0	1,396.4	1,385.5	1,380.8	2.8	2.9	-125.37	-52.7	103.6	144.3	139.0	5.30	27.219		
1,500.0	1,495.8	1,483.9	1,478.2	3.1	3.2	-124.91	-62.1	115.0	161.6	155.9	5.76	28.068		
1,600.0	1,595.2	1,582.4	1,575.6	3.3	3.5	-124.53	-71.4	126.5	178.9	172.7	6.22	28.778		
1,700.0	1,694.6	1,680.9	1,672.9	3.6	3.7	-124.22	-80.8	137.9	196.2	189.5	6.68	29.380		
1,800.0	1,794.0	1,779.4	1,770.3	3.8	4.0	-123.96	-90.1	149.3	213.5	206.3	7.14	29.896		
1,900.0	1,893.3	1,877.9	1,867.7	4.1	4.3	-123.74	-99.5	160.7	230.8	223.2	7.61	30.343		
2,000.0	1,992.7	1,976.4	1,965.1	4.3	4.6	-123.55	-108.8	172.1	248.1	240.0	8.07	30.734		
2,100.0	2,092.1	2,074.9	2,062.5	4.6	5.0	-123.39	-118.2	183.6	265.4	256.8	8.54	31.078		
2,200.0	2,191.5	2,173.4	2,159.8	4.8	5.3	-123.24	-127.5	195.0	282.7	273.7	9.01	31.383		
2,300.0	2,290.9	2,271.9	2,257.2	5.1	5.6	-123.11	-136.9	206.4	300.0	290.5	9.48	31.656		
2,400.0	2,390.3	2,370.3	2,354.6	5.4	5.9	-123.00	-146.2	217.8	317.3	307.3	9.95	31.900		
2,500.0	2,489.6	2,468.8	2,452.0	5.6	6.2	-122.90	-155.6	229.2	334.6	324.2	10.42	32.121		
2,600.0	2,589.0	2,567.3	2,549.3	5.9	6.5	-122.81	-164.9	240.7	351.9	341.0	10.89	32.321		
2,700.0	2,688.4	2,665.8	2,646.7	6.1	6.8	-122.72	-174.2	252.1	369.2	357.9	11.36	32.503		
2,800.0	2,787.8	2,764.3	2,744.1	6.4	7.1	-122.65	-183.6	263.5	386.5	374.7	11.83	32.670		
2,900.0	2,887.2	2,862.8	2,841.5	6.6	7.4	-122.58	-192.9	274.9	403.8	391.5	12.30	32.823		
3,000.0	2,986.5	2,961.3	2,938.9	6.9	7.7	-122.51	-202.3	286.3	421.1	408.4	12.78	32.964		
3,100.0	3,085.9	3,059.8	3,036.2	7.2	8.0	-122.45	-211.6	297.8	438.5	425.2	13.25	33.094		
3,200.0	3,185.3	3,158.3	3,133.6	7.4	8.3	-122.40	-221.0	309.2	455.8	442.0	13.72	33.215		
3,300.0	3,284.7	3,256.8	3,231.0	7.7	8.6	-122.35	-230.3	320.6	473.1	458.9	14.20	33.327		
3,400.0	3,384.1	3,355.2	3,328.4	7.9	8.9	-122.30	-239.7	332.0	490.4	475.7	14.67	33.431		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SUR										Offset Site Error:		0.0 ft	
Survey Program: 218-MWD										Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
0.0	0.0	4.1	4.1	0.0	0.0	1.79	328.3	10.2	328.5				
100.0	100.0	107.9	107.9	0.2	0.2	1.88	327.7	10.8	327.9	327.5	0.33	996.013	
200.0	200.0	211.5	211.5	0.3	0.4	2.16	325.8	12.3	326.1	325.4	0.67	483.739	
300.0	300.0	317.2	317.1	0.5	0.6	2.14	322.4	12.0	322.9	321.9	1.04	311.642	
400.0	400.0	420.7	420.3	0.7	0.8	1.07	317.8	6.0	318.3	316.9	1.43	222.980	
500.0	500.0	521.3	520.2	0.9	1.0	147.82	312.5	-5.1	313.7	311.9	1.82	172.674	
600.0	600.0	617.9	615.5	1.0	1.3	145.29	307.7	-20.2	311.4	309.1	2.29	135.810	
624.1	624.0	640.8	637.9	1.1	1.4	144.60	306.6	-24.4	311.3	308.9	2.42	128.720 CC, ES	
700.0	699.9	712.2	707.9	1.2	1.7	142.29	303.7	-38.6	312.3	309.5	2.83	110.309	
800.0	799.7	802.7	796.0	1.4	2.0	139.12	301.1	-59.1	317.4	314.0	3.41	93.107	
900.0	899.4	889.6	880.1	1.6	2.4	136.06	301.3	-80.7	328.2	324.2	3.99	82.155	
1,000.0	998.9	985.1	972.4	1.8	2.8	133.07	303.1	-104.9	342.9	338.3	4.62	74.280	
1,100.0	1,098.3	1,079.6	1,063.9	2.1	3.3	130.61	305.4	-128.7	359.9	354.7	5.24	68.699	
1,200.0	1,197.7	1,171.1	1,152.1	2.3	3.7	128.37	308.5	-152.9	378.8	373.0	5.86	64.629	
1,300.0	1,297.1	1,259.5	1,237.0	2.6	4.2	126.32	312.6	-177.2	400.0	393.5	6.47	61.850	
1,400.0	1,396.4	1,343.0	1,316.7	2.8	4.6	124.53	318.6	-201.3	424.4	417.4	7.04	60.280	
1,500.0	1,495.8	1,438.3	1,407.5	3.1	5.2	122.74	326.8	-228.9	450.6	443.0	7.66	58.856	
1,600.0	1,595.2	1,532.9	1,497.7	3.3	5.7	121.18	335.1	-256.3	477.3	469.1	8.25	57.840 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SUR		Offset Site Error:		0.0 ft
Survey Program: 216-MWD															Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance										
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning				
10,300.0	8,036.0	8,172.3	8,057.1	38.0	21.6	88.02	2,053.3	-120.5	455.6	397.3	58.32	7.812					
10,400.0	8,036.0	8,174.1	8,058.9	39.6	21.6	88.28	2,053.4	-120.4	417.6	357.6	59.95	6.965					
10,500.0	8,036.0	8,175.9	8,060.7	41.2	21.6	88.53	2,053.4	-120.4	401.4	339.9	61.59	6.518					
10,516.1	8,036.0	8,176.2	8,061.0	41.4	21.6	88.57	2,053.4	-120.4	401.1	339.3	61.86	6.484	CC, ES				
10,600.0	8,036.0	8,177.7	8,062.5	42.8	21.6	88.79	2,053.4	-120.3	409.8	346.5	63.24	6.480	SF				
10,700.0	8,036.0	8,179.5	8,064.3	44.4	21.6	89.04	2,053.5	-120.3	441.2	376.3	64.90	6.799					
10,800.0	8,036.0	8,181.3	8,066.1	46.0	21.6	89.30	2,053.5	-120.2	491.4	424.8	66.56	7.382					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SUR														Offset Site Error:	0.0 ft
Survey Program: 1020-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	3.0	3.0	0.0	0.0	20.11	280.1	102.5	298.3						
100.0	100.0	103.0	103.0	0.2	0.2	20.13	280.1	102.6	298.3	297.9	0.33	899.227			
200.0	200.0	203.0	203.0	0.3	0.4	20.18	280.0	102.9	298.3	297.6	0.68	438.090			
300.0	300.0	303.0	303.0	0.5	0.5	20.27	279.8	103.4	298.3	297.3	1.03	289.587			
400.0	400.0	403.0	403.0	0.7	0.7	20.40	279.6	104.0	298.3	296.9	1.38	216.275			
500.0	500.0	503.0	503.0	0.9	0.9	169.25	279.3	104.8	299.2	297.4	1.73	172.694			
600.0	600.0	602.9	602.9	1.0	1.1	169.53	278.9	105.8	301.7	299.7	2.08	144.949			
700.0	699.9	702.8	702.8	1.2	1.2	169.90	278.5	106.9	306.1	303.6	2.43	125.916			
800.0	799.7	802.5	802.5	1.4	1.4	170.35	278.0	108.2	312.1	309.3	2.78	112.310			
900.0	899.4	902.2	902.1	1.6	1.6	170.86	277.5	109.7	319.9	316.8	3.13	102.320			
1,000.0	998.9	1,001.6	1,001.6	1.8	1.8	171.42	276.9	111.4	329.5	326.0	3.47	94.860			
1,100.0	1,098.3	1,110.5	1,110.4	2.1	1.9	172.03	275.1	112.7	339.3	335.5	3.84	88.396			
1,200.0	1,197.7	1,228.2	1,227.9	2.3	2.2	172.46	269.2	111.0	345.2	341.0	4.22	81.834			
1,300.0	1,297.1	1,345.9	1,344.9	2.6	2.4	173.14	256.6	108.0	345.3	340.7	4.61	74.946			
1,400.0	1,396.4	1,458.3	1,456.0	2.8	2.7	174.04	240.0	104.7	341.7	336.7	4.99	68.474			
1,500.0	1,495.8	1,570.8	1,566.5	3.1	3.0	174.97	219.5	99.5	334.2	328.9	5.38	62.139			
1,600.0	1,595.2	1,676.8	1,670.0	3.3	3.4	176.13	196.8	94.5	323.9	318.2	5.76	56.190			
1,700.0	1,694.6	1,783.7	1,773.8	3.6	3.8	177.24	172.2	87.5	311.4	305.3	6.15	50.633			
1,800.0	1,794.0	1,883.6	1,870.3	3.8	4.2	178.53	147.5	81.0	297.6	291.0	6.54	45.475			
1,900.0	1,893.3	1,979.6	1,963.2	4.1	4.6	-179.88	123.9	76.2	284.7	277.7	6.95	40.985			
2,000.0	1,992.7	2,080.8	2,061.1	4.3	5.0	-177.93	98.5	71.3	271.7	264.3	7.39	36.786			
2,100.0	2,092.1	2,179.0	2,155.8	4.6	5.4	-175.68	73.1	67.2	258.8	250.9	7.86	32.942			
2,200.0	2,191.5	2,276.2	2,249.7	4.8	5.9	-173.26	48.4	63.2	246.8	238.5	8.35	29.557			
2,300.0	2,290.9	2,373.9	2,344.3	5.1	6.3	-170.82	24.5	58.7	235.7	226.8	8.87	26.562			
2,400.0	2,390.3	2,473.1	2,440.6	5.4	6.7	-168.13	0.6	54.4	225.6	216.1	9.45	23.878			
2,500.0	2,489.6	2,573.4	2,537.7	5.6	7.2	-165.09	-24.3	49.7	215.1	205.1	10.09	21.330			
2,600.0	2,589.0	2,672.3	2,633.3	5.9	7.6	-161.75	-49.1	45.0	205.2	194.4	10.78	19.037			
2,700.0	2,688.4	2,770.2	2,728.1	6.1	8.1	-158.50	-72.6	39.6	196.0	184.5	11.49	17.055			
2,800.0	2,787.8	2,868.1	2,823.2	6.4	8.5	-155.01	-95.7	34.6	188.2	175.9	12.27	15.331			
2,900.0	2,887.2	2,970.5	2,922.3	6.6	9.0	-150.77	-120.7	29.5	180.8	167.6	13.18	13.718			
3,000.0	2,986.5	3,070.1	3,018.4	6.9	9.5	-146.20	-146.1	23.2	172.7	158.6	14.15	12.202			
3,100.0	3,085.9	3,167.1	3,112.0	7.2	9.9	-141.24	-171.0	17.6	166.3	151.1	15.19	10.950			
3,200.0	3,185.3	3,268.1	3,209.6	7.4	10.4	-136.05	-196.0	11.4	161.1	144.9	16.25	9.916			
3,300.0	3,284.7	3,366.4	3,304.7	7.7	10.8	-130.94	-219.9	4.5	156.7	139.4	17.30	9.057			
3,400.0	3,384.1	3,464.3	3,399.1	7.9	11.3	-125.05	-245.1	-1.6	154.1	135.7	18.42	8.368			
3,492.6	3,476.1	3,556.1	3,487.4	8.2	11.8	-119.14	-269.5	-7.3	153.4	134.0	19.43	7.898 CC			
3,500.0	3,483.4	3,563.2	3,494.2	8.2	11.8	-118.69	-271.4	-7.7	153.4	133.9	19.50	7.869 ES			
3,600.0	3,582.8	3,660.0	3,587.7	8.5	12.3	-112.94	-296.0	-12.9	155.3	134.9	20.42	7.604			
3,700.0	3,682.2	3,759.9	3,684.5	8.7	12.7	-107.65	-320.1	-18.0	158.8	137.5	21.25	7.474			
3,800.0	3,781.6	3,859.8	3,781.3	9.0	13.2	-102.47	-344.5	-23.8	162.9	140.9	21.98	7.412			
3,900.0	3,881.0	3,959.1	3,877.2	9.2	13.7	-97.33	-369.3	-30.4	167.7	145.1	22.62	7.417			
4,000.0	3,980.3	4,057.0	3,971.7	9.5	14.2	-92.44	-394.1	-36.9	174.1	151.0	23.14	7.525			
4,100.0	4,079.7	4,155.1	4,066.4	9.8	14.6	-88.11	-418.7	-42.8	182.0	158.5	23.57	7.724			
4,200.0	4,179.1	4,255.0	4,163.1	10.0	15.1	-84.36	-443.1	-48.1	191.1	167.2	23.93	7.985			
4,300.0	4,278.5	4,358.5	4,264.1	10.3	15.5	-81.67	-465.2	-53.1	199.2	174.9	24.30	8.199			
4,400.0	4,377.9	4,460.5	4,364.4	10.5	15.8	-80.05	-483.4	-57.7	205.7	181.0	24.71	8.323			
4,500.0	4,477.2	4,562.0	4,464.6	10.8	16.2	-79.10	-499.5	-61.4	211.5	186.3	25.15	8.408			
4,600.0	4,576.6	4,664.4	4,566.0	11.1	16.4	-78.76	-513.4	-64.6	216.3	190.6	25.63	8.436			
4,700.0	4,676.0	4,768.1	4,669.0	11.3	16.7	-79.05	-524.8	-67.3	219.6	193.5	26.16	8.396			
4,800.0	4,775.4	4,869.1	4,769.6	11.6	16.9	-80.11	-532.8	-68.7	221.9	195.1	26.73	8.301			
4,900.0	4,874.8	4,970.0	4,870.3	11.8	17.1	-81.48	-539.6	-69.6	223.7	196.4	27.33	8.187			
5,000.0	4,974.2	5,072.2	4,972.3	12.1	17.3	-82.87	-546.0	-71.1	225.0	197.1	27.93	8.058			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SUR														Offset Site Error:	0.0 ft
Survey Program: 1020-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
5,100.0	5,073.5	5,174.8	5,074.7	12.4	17.4	-84.39	-551.0	-73.3	225.1	196.6	28.51	7.897			
5,200.0	5,172.9	5,274.9	5,174.9	12.6	17.5	-86.75	-552.9	-73.8	224.9	195.8	29.11	7.726			
5,281.4	5,253.8	5,356.4	5,256.3	12.8	17.6	-88.89	-553.6	-74.0	224.8	195.2	29.59	7.598			
5,300.0	5,272.3	5,375.0	5,274.9	12.9	17.6	-89.38	-553.7	-74.0	224.8	195.1	29.70	7.571			
5,400.0	5,371.7	5,475.2	5,375.2	13.1	17.7	-92.03	-554.3	-74.4	225.0	194.7	30.25	7.436			
5,500.0	5,471.1	5,575.6	5,475.6	13.4	17.8	-94.66	-554.8	-75.2	225.2	194.4	30.77	7.319			
5,600.0	5,570.4	5,675.4	5,575.3	13.7	17.9	-97.24	-555.3	-76.3	225.5	194.3	31.24	7.218			
5,700.0	5,669.8	5,774.8	5,674.8	13.9	18.0	-99.76	-555.9	-77.5	226.3	194.6	31.67	7.145			
5,800.0	5,769.2	5,874.2	5,774.1	14.2	18.1	-102.24	-556.5	-78.6	227.6	195.5	32.06	7.098			
5,900.0	5,868.6	5,973.4	5,873.3	14.4	18.2	-104.77	-556.9	-79.6	229.4	197.0	32.41	7.078 SF			
6,000.0	5,968.0	6,073.1	5,973.0	14.7	18.3	-107.34	-557.0	-80.4	231.7	199.0	32.71	7.083			
6,100.0	6,067.3	6,172.7	6,072.6	15.0	18.4	-109.95	-556.7	-81.3	234.3	201.3	32.96	7.109			
6,200.0	6,166.7	6,272.1	6,172.0	15.2	18.5	-112.57	-556.0	-82.2	237.4	204.2	33.17	7.157			
6,300.0	6,266.1	6,371.3	6,271.2	15.5	18.6	-115.15	-555.2	-83.0	241.0	207.6	33.33	7.230			
6,400.0	6,365.5	6,469.1	6,369.0	15.8	18.7	-117.77	-553.8	-83.4	245.4	212.0	33.42	7.342			
6,500.0	6,464.9	6,566.8	6,466.6	16.0	18.8	-120.51	-551.4	-83.2	251.0	217.5	33.46	7.500			
6,600.0	6,564.2	6,665.2	6,565.0	16.3	18.8	-123.26	-548.5	-82.6	257.6	224.1	33.46	7.698			
6,700.0	6,663.6	6,764.5	6,664.2	16.5	18.9	-125.96	-545.3	-81.7	264.9	231.5	33.42	7.927			
6,800.0	6,763.0	6,866.4	6,766.1	16.8	18.9	-128.65	-541.6	-81.7	272.1	238.8	33.34	8.161			
6,900.0	6,862.4	6,967.7	6,867.3	17.1	19.0	-131.28	-537.7	-82.7	278.8	245.6	33.23	8.391			
7,000.0	6,961.8	7,067.9	6,967.4	17.3	19.0	-133.92	-533.2	-84.5	285.6	252.5	33.08	8.634			
7,100.0	7,061.2	7,166.7	7,066.0	17.6	19.1	-136.57	-527.9	-86.7	292.6	259.7	32.89	8.897			
7,200.0	7,160.5	7,264.0	7,163.1	17.8	19.1	-139.17	-522.0	-88.7	300.6	267.9	32.68	9.199			
7,300.0	7,259.9	7,360.4	7,259.2	18.1	19.1	-141.71	-515.5	-90.3	309.8	277.4	32.47	9.542			
7,400.0	7,359.3	7,456.0	7,354.7	18.4	19.2	-144.10	-508.7	-91.3	320.5	288.2	32.27	9.930			
7,500.0	7,458.8	7,552.6	7,450.9	18.6	19.2	165.59	-501.5	-91.4	331.7	299.7	32.06	10.347			
7,600.0	7,558.2	7,650.5	7,548.5	18.6	19.2	87.38	-494.1	-91.1	337.9	305.7	32.18	10.498			
7,700.0	7,654.7	7,750.3	7,648.1	18.5	19.3	80.71	-487.4	-90.2	337.8	305.0	32.88	10.276			
7,800.0	7,745.4	7,844.2	7,742.0	18.2	19.4	83.96	-484.4	-88.9	334.0	300.0	33.95	9.837			
7,868.4	7,802.8	7,902.1	7,799.8	18.0	19.5	88.28	-483.9	-88.0	332.5	297.9	34.62	9.604			
7,900.0	7,827.6	7,926.8	7,824.6	17.9	19.5	90.47	-483.9	-87.5	332.9	298.1	34.85	9.553			
8,000.0	7,898.8	7,996.5	7,894.2	17.5	19.6	96.98	-484.5	-86.2	342.6	307.6	35.05	9.775			
8,100.0	7,956.7	8,051.3	7,949.0	17.1	19.7	101.12	-485.6	-85.0	369.3	334.6	34.64	10.662			
8,200.0	7,999.7	8,091.4	7,989.1	16.8	19.8	101.58	-486.6	-84.1	414.9	380.7	34.16	12.143			
8,300.0	8,026.4	8,115.2	8,012.8	16.6	19.8	97.23	-487.2	-83.6	476.7	442.6	34.06	13.996			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29XD (EXISTING) - SYNERGY WELL - PLAN														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Total Uncertainty Axis		Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	21.41	276.5	108.4	297.1						
100.0	100.0	90.0	90.0	0.2	0.2	21.41	276.5	108.4	296.9	296.6	0.31	961.151			
200.0	200.0	190.0	190.0	0.3	0.3	21.41	276.5	108.4	296.9	296.3	0.66	451.286 CC, ES			
300.0	300.0	284.2	284.2	0.5	0.5	21.58	276.9	109.5	297.8	296.8	1.00	297.897			
400.0	400.0	377.5	377.4	0.7	0.7	22.19	278.4	113.5	300.9	299.5	1.35	222.437			
500.0	500.0	470.5	470.1	0.9	0.9	171.86	280.9	120.4	307.1	305.4	1.70	180.331			
600.0	600.0	562.6	561.6	1.0	1.1	173.25	284.4	129.9	317.4	315.3	2.07	153.035			
700.0	699.9	653.6	651.7	1.2	1.4	174.92	288.8	142.0	331.9	329.4	2.46	135.056			
800.0	799.7	743.2	739.9	1.4	1.7	176.77	294.2	156.6	350.7	347.9	2.85	123.037			
900.0	899.4	831.0	825.9	1.6	2.0	178.70	300.3	173.3	374.0	370.7	3.25	115.200			
1,000.0	998.9	922.5	915.0	1.8	2.4	-179.29	307.5	192.9	401.3	397.7	3.65	109.889			
1,100.0	1,098.3	1,017.2	1,007.1	2.1	2.8	-177.44	315.1	213.5	430.6	426.6	4.06	106.039			
1,200.0	1,197.7	1,111.9	1,099.3	2.3	3.2	-175.82	322.6	234.0	460.4	456.0	4.47	103.090			
1,300.0	1,297.1	1,206.6	1,191.4	2.6	3.6	-174.41	330.2	254.5	490.5	485.7	4.87	100.802 SF			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 31-29D (EXISTING) - SYNERGY WELL - SU													Offset Site Error:	0.0 ft
Survey Program: 248-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
12,100.0	8,036.0	8,261.9	8,073.1	67.8	28.2	-90.32	4,019.4	-790.0	450.9	359.8	91.16	4.947		
12,200.0	8,036.0	8,261.9	8,073.1	69.5	28.2	-90.32	4,019.4	-790.0	364.0	271.1	92.87	3.919		
12,300.0	8,036.0	8,262.0	8,073.1	71.2	28.2	-90.32	4,019.4	-790.0	285.7	191.1	94.59	3.020		
12,400.0	8,036.0	8,262.0	8,073.1	72.9	28.2	-90.33	4,019.4	-790.0	225.3	129.0	96.31	2.339		
12,500.0	8,036.0	8,262.0	8,073.2	74.6	28.2	-90.33	4,019.4	-790.0	199.7	101.7	98.03	2.037		
12,504.3	8,036.0	8,262.0	8,073.2	74.7	28.2	-90.33	4,019.4	-790.0	199.6	101.5	98.10	2.035	CC, ES, SF	
12,600.0	8,036.0	8,262.0	8,073.2	76.4	28.2	-90.33	4,019.4	-790.0	221.4	121.6	99.75	2.219		
12,700.0	8,036.0	8,262.0	8,073.2	78.1	28.2	-90.34	4,019.4	-790.0	279.5	178.1	101.47	2.755		
12,800.0	8,036.0	8,262.0	8,073.2	79.8	28.2	-90.34	4,019.4	-790.0	356.8	253.6	103.19	3.457		
12,900.0	8,036.0	8,262.0	8,073.2	81.5	28.2	-90.35	4,019.4	-790.0	443.2	338.3	104.92	4.224		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 32-29D (EXISTING) - SYNERGY WELL - SU		Offset Site Error:		0.0 ft	
Survey Program: 154-MWD															Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning					
10,700.0	8,036.0	8,172.9	8,058.3	44.4	21.2	-87.11	2,659.7	-754.7	492.2	433.6	58.58	8.402						
10,800.0	8,036.0	8,176.3	8,061.7	46.0	21.2	-88.04	2,659.8	-754.6	404.2	344.0	60.25	6.709						
10,900.0	8,036.0	8,179.9	8,065.3	47.7	21.2	-89.00	2,660.0	-754.5	323.3	261.4	61.93	5.221						
11,000.0	8,036.0	8,183.5	8,068.9	49.3	21.2	-89.98	2,660.1	-754.4	256.2	192.6	63.59	4.028						
11,100.0	8,036.0	8,187.3	8,072.7	51.0	21.3	-91.00	2,660.2	-754.3	216.1	150.8	65.24	3.312						
11,144.8	8,036.0	8,189.0	8,074.4	51.7	21.3	-91.46	2,660.3	-754.2	211.4	145.4	65.98	3.204	CC, ES, SF					
11,200.0	8,036.0	8,191.1	8,076.5	52.6	21.3	-92.04	2,660.4	-754.2	218.5	151.6	66.88	3.266						
11,300.0	8,036.0	8,195.1	8,080.5	54.3	21.3	-93.12	2,660.6	-754.1	262.2	193.7	68.51	3.827						
11,400.0	8,036.0	8,199.2	8,084.6	56.0	21.3	-94.22	2,660.7	-754.0	331.2	261.1	70.10	4.725						
11,500.0	8,036.0	8,203.4	8,088.8	57.7	21.3	-95.36	2,660.9	-753.9	413.1	341.4	71.68	5.764						

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 33-29PD (EXISTING) - SYNERGY WELL - S														Offset Site Error: 0.0 ft	
Survey Program: 127-MWD														Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	3.0	3.0	0.0	0.0	0.05	339.9	0.3	339.9						
100.0	100.0	102.5	102.5	0.2	0.2	0.04	340.0	0.3	340.0	339.6	0.31	1,087.901			
200.0	200.0	199.4	199.4	0.3	0.3	0.01	340.4	0.1	340.4	339.8	0.65	522.327			
300.0	300.0	299.3	299.3	0.5	0.5	-0.13	341.6	-0.8	341.6	340.6	1.00	341.371			
400.0	400.0	400.5	400.5	0.7	0.7	-0.35	342.5	-2.1	342.5	341.2	1.35	253.367			
500.0	500.0	498.3	498.3	0.9	0.9	148.07	343.5	-3.9	344.3	342.6	1.70	202.289			
600.0	600.0	598.5	598.3	1.0	1.0	147.67	344.8	-7.6	347.9	345.8	2.06	168.725			
700.0	699.9	698.9	698.7	1.2	1.2	147.18	345.9	-12.8	352.7	350.3	2.43	145.198			
800.0	799.7	795.8	795.3	1.4	1.4	146.75	347.3	-18.5	359.4	356.6	2.80	128.581			
900.0	899.4	890.7	890.1	1.6	1.6	146.60	349.7	-23.3	368.7	365.5	3.16	116.773			
1,000.0	998.9	985.3	984.6	1.8	1.8	146.66	353.3	-27.6	380.6	377.1	3.52	108.052			
1,100.0	1,098.3	1,079.0	1,078.0	2.1	2.0	146.87	358.0	-31.8	395.0	391.1	3.89	101.520			
1,200.0	1,197.7	1,169.9	1,168.6	2.3	2.2	147.09	364.0	-35.9	411.1	406.8	4.26	96.493			
1,300.0	1,297.1	1,257.6	1,255.8	2.6	2.4	147.03	371.9	-41.8	429.4	424.8	4.64	92.557			
1,400.0	1,396.4	1,344.2	1,341.5	2.8	2.7	146.74	381.7	-49.5	450.2	445.2	5.03	89.559			
1,500.0	1,495.8	1,429.0	1,425.0	3.1	2.9	146.31	393.2	-58.4	473.4	467.9	5.42	87.297			
1,600.0	1,595.2	1,522.0	1,516.1	3.3	3.2	145.67	407.8	-70.0	498.6	492.7	5.86	85.149			
9,500.0	8,036.0	8,201.5	8,035.1	26.1	26.4	-89.11	1,350.8	-749.4	420.0	371.9	48.10	8.732			
9,600.0	8,036.0	8,203.7	8,037.2	27.5	26.4	-89.60	1,350.9	-749.4	345.3	295.8	49.54	6.970			
9,700.0	8,036.0	8,205.9	8,039.4	28.9	26.4	-90.10	1,350.9	-749.3	286.4	235.4	51.02	5.615			
9,800.0	8,036.0	8,208.1	8,041.7	30.3	26.4	-90.61	1,351.0	-749.3	254.6	202.1	52.52	4.849			
9,836.1	8,036.0	8,208.9	8,042.5	30.9	26.4	-90.80	1,351.0	-749.3	252.1	199.0	53.07	4.750 CC, ES, SF			
9,900.0	8,036.0	8,210.4	8,044.0	31.8	26.4	-91.13	1,351.0	-749.3	260.0	206.0	54.04	4.812			
10,000.0	8,036.0	8,212.8	8,046.3	33.3	26.4	-91.67	1,351.1	-749.2	300.7	245.1	55.58	5.409			
10,100.0	8,036.0	8,215.1	8,048.7	34.9	26.4	-92.21	1,351.1	-749.2	364.9	307.8	57.14	6.386			
10,200.0	8,036.0	8,217.6	8,051.2	36.4	26.4	-92.76	1,351.2	-749.2	442.6	383.9	58.70	7.540			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 34-29D (EXISTING) - SYNERGY WELL - SU														Offset Site Error:	0.0 ft
Survey Program: 217-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	6.05	319.8	33.9	321.8						
100.0	100.0	90.7	90.7	0.2	0.2	6.14	319.7	34.4	321.5	321.2	0.31	1,025.184			
200.0	200.0	191.5	191.4	0.3	0.3	6.46	319.2	36.1	321.2	320.5	0.67	481.033			
300.0	300.0	294.5	294.4	0.5	0.5	6.82	318.1	38.0	320.4	319.4	1.02	314.107			
400.0	400.0	393.5	393.5	0.7	0.7	6.70	316.9	37.2	319.0	317.7	1.36	234.027			
482.2	482.2	476.5	476.4	0.8	0.8	155.02	316.1	35.0	318.6	317.0	1.65	192.934			
500.0	500.0	494.4	494.3	0.9	0.9	154.95	316.0	34.5	318.6	316.9	1.71	185.986			
600.0	600.0	596.6	596.5	1.0	1.0	154.48	314.6	30.6	319.3	317.2	2.07	154.413			
700.0	699.9	694.0	693.7	1.2	1.2	154.16	313.4	26.9	321.6	319.2	2.42	133.091			
800.0	799.7	793.2	792.9	1.4	1.4	154.22	312.5	24.6	326.0	323.2	2.77	117.748			
900.0	899.4	891.6	891.3	1.6	1.6	154.47	311.9	22.8	332.3	329.2	3.12	106.468			
1,000.0	998.9	991.7	991.3	1.8	1.8	154.83	311.5	20.9	340.4	336.9	3.48	97.827			
1,100.0	1,098.3	1,091.7	1,091.3	2.1	1.9	155.23	310.9	18.6	349.5	345.6	3.84	90.990			
1,200.0	1,197.7	1,191.1	1,190.7	2.3	2.1	155.62	310.4	16.4	358.8	354.6	4.20	85.369			
1,300.0	1,297.1	1,290.7	1,290.3	2.6	2.3	155.98	309.8	14.0	368.1	363.5	4.57	80.598			
1,400.0	1,396.4	1,391.2	1,390.7	2.8	2.5	156.33	309.2	11.7	377.3	372.4	4.93	76.534			
1,500.0	1,495.8	1,498.3	1,497.8	3.1	2.7	156.72	307.5	9.3	385.7	380.3	5.31	72.641			
1,600.0	1,595.2	1,604.5	1,603.8	3.3	2.9	156.57	304.0	3.0	391.8	386.1	5.70	68.716			
1,700.0	1,694.6	1,712.5	1,711.2	3.6	3.1	155.86	299.2	-7.4	396.3	390.2	6.12	64.706			
1,800.0	1,794.0	1,816.7	1,814.3	3.8	3.4	154.70	293.3	-21.1	399.3	392.7	6.57	60.757			
1,900.0	1,893.3	1,922.3	1,918.4	4.1	3.7	153.23	286.3	-37.2	401.2	394.1	7.05	56.873			
2,000.0	1,992.7	2,028.5	2,022.7	4.3	4.0	151.54	277.4	-55.0	401.5	393.9	7.57	53.006			
2,100.0	2,092.1	2,130.4	2,122.4	4.6	4.4	149.63	268.0	-74.2	401.1	393.0	8.13	49.316			
2,187.3	2,178.9	2,217.1	2,206.5	4.8	4.7	147.63	259.6	-93.2	400.8	392.1	8.67	46.225			
2,200.0	2,191.5	2,229.3	2,218.3	4.8	4.8	147.32	258.4	-96.0	400.8	392.1	8.75	45.802			
2,300.0	2,290.9	2,330.0	2,315.6	5.1	5.2	144.65	248.8	-120.4	401.4	392.0	9.43	42.576			
2,400.0	2,390.3	2,432.1	2,414.1	5.4	5.6	141.97	237.8	-144.9	401.6	391.5	10.14	39.607			
2,500.0	2,489.6	2,533.6	2,511.9	5.6	6.1	139.31	226.2	-169.1	402.0	391.2	10.87	36.971			
2,600.0	2,589.0	2,628.7	2,603.8	5.9	6.5	136.89	215.2	-191.4	403.1	391.5	11.59	34.785			
2,700.0	2,688.4	2,722.7	2,694.6	6.1	6.9	134.60	205.5	-213.1	406.0	393.7	12.30	33.015			
2,800.0	2,787.8	2,821.6	2,790.3	6.4	7.4	132.18	195.7	-236.4	410.2	397.1	13.07	31.391			
2,900.0	2,887.2	2,921.2	2,886.2	6.6	7.8	129.62	185.3	-260.9	414.9	401.0	13.85	29.953			
3,000.0	2,986.5	3,019.1	2,980.6	6.9	8.3	127.16	174.8	-285.0	420.2	405.6	14.64	28.703			
3,100.0	3,085.9	3,111.8	3,069.6	7.2	8.8	124.80	165.2	-308.7	427.0	411.6	15.40	27.718			
3,200.0	3,185.3	3,164.5	3,121.4	7.4	8.7	124.26	164.9	-318.1	440.1	424.5	15.60	28.202			
3,300.0	3,284.7	3,309.5	3,263.6	7.7	9.2	125.60	181.5	-328.1	462.6	446.3	16.22	28.525			
3,400.0	3,384.1	3,420.2	3,370.8	7.9	9.7	123.38	171.4	-354.2	470.1	453.1	17.02	27.627			
3,500.0	3,483.4	3,518.5	3,465.7	8.2	10.1	121.42	161.4	-377.3	477.3	459.6	17.77	26.867			
3,600.0	3,582.8	3,622.2	3,565.6	8.5	10.6	119.25	149.7	-402.7	484.6	466.1	18.54	26.134			
3,700.0	3,682.2	3,724.1	3,664.2	8.7	11.1	117.40	138.0	-425.4	491.2	471.9	19.28	25.479			
3,800.0	3,781.6	3,821.4	3,758.3	9.0	11.6	115.63	126.7	-447.5	498.4	478.4	20.00	24.919			
8,100.0	7,956.7	8,041.6	7,949.1	17.1	19.3	-42.60	50.2	-659.0	469.4	441.0	28.37	16.547			
8,200.0	7,999.7	8,084.7	7,992.2	16.8	19.3	-60.30	50.7	-657.8	389.4	360.5	28.84	13.499			
8,300.0	8,026.4	8,112.0	8,019.5	16.6	19.3	-78.90	50.9	-657.1	311.0	281.5	29.45	10.558			
8,400.0	8,036.0	8,122.5	8,030.0	16.6	19.3	-90.78	51.1	-656.8	244.8	215.4	29.43	8.318			
8,500.0	8,036.0	8,123.5	8,031.1	16.8	19.3	-91.41	51.1	-656.8	207.8	178.2	29.62	7.016			
8,533.7	8,036.0	8,123.9	8,031.4	16.9	19.3	-91.51	51.1	-656.8	205.0	175.3	29.75	6.892 CC, ES, SF			
8,600.0	8,036.0	8,124.6	8,032.1	17.2	19.3	-91.70	51.1	-656.7	215.5	185.4	30.01	7.180			
8,700.0	8,036.0	8,125.6	8,033.1	17.7	19.3	-91.99	51.1	-656.7	264.0	233.4	30.59	8.629			
8,800.0	8,036.0	8,126.7	8,034.2	18.4	19.3	-92.28	51.1	-656.7	336.0	304.7	31.33	10.725			
8,900.0	8,036.0	8,127.7	8,035.2	19.2	19.3	-92.58	51.1	-656.7	419.7	387.5	32.22	13.026			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design		S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - SU											Offset Site Error:		0.0 ft	
Survey Program:		211-MWD											Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor				
0.0	0.0	4.0	4.0	0.0	0.0	9.32	310.4	51.0	314.5							
100.0	100.0	103.7	103.7	0.2	0.2	9.38	310.4	51.3	314.6	314.2	0.32	974.574				
200.0	200.0	203.4	203.4	0.3	0.3	9.54	310.4	52.2	314.7	314.0	0.66	475.640	ES			
300.0	300.0	298.9	298.9	0.5	0.5	9.79	310.9	53.7	315.6	314.5	1.01	313.779				
400.0	400.0	389.8	389.7	0.7	0.7	10.14	313.3	56.0	318.6	317.2	1.35	236.066				
500.0	500.0	481.8	481.6	0.9	0.9	159.26	318.0	59.4	325.1	323.4	1.68	193.269				
600.0	600.0	570.7	570.1	1.0	1.1	159.82	324.9	63.4	336.0	334.0	2.02	166.518				
700.0	699.9	656.2	654.9	1.2	1.3	160.48	334.3	68.3	352.0	349.7	2.35	149.874				
800.0	799.7	741.7	739.3	1.4	1.6	161.23	346.6	74.5	373.3	370.7	2.68	139.276				
900.0	899.4	825.9	821.9	1.6	1.9	162.06	361.1	81.9	399.4	396.4	3.01	132.594				
1,000.0	998.9	911.3	905.1	1.8	2.2	163.00	378.0	91.0	430.0	426.7	3.35	128.535				
1,100.0	1,098.3	1,002.3	993.5	2.1	2.6	164.07	397.1	101.6	463.5	459.8	3.69	125.576				
1,200.0	1,197.7	1,089.5	1,078.0	2.3	3.0	165.09	415.3	112.6	497.5	493.5	4.03	123.499	SF			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - PL													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	29.15	256.1	142.8	293.4					
100.0	100.0	92.0	92.0	0.2	0.2	29.15	256.1	142.8	293.3	292.9	0.31	938.638		
200.0	200.0	192.0	192.0	0.3	0.3	29.15	256.1	142.8	293.3	292.6	0.66	443.338		
300.0	300.0	292.0	292.0	0.5	0.5	29.15	256.1	142.8	293.3	292.2	1.01	290.198		
400.0	400.0	392.0	392.0	0.7	0.7	29.15	256.1	142.8	293.3	291.9	1.36	215.693 CC, ES		
500.0	500.0	492.0	492.0	0.9	0.9	177.81	256.1	142.8	294.1	292.4	1.71	172.157		
600.0	600.0	592.0	592.0	1.0	1.0	177.83	256.1	142.8	296.7	294.7	2.06	144.265		
700.0	699.9	691.9	691.9	1.2	1.2	177.86	256.1	142.8	301.1	298.7	2.40	125.211		
800.0	799.7	791.7	791.7	1.4	1.4	177.90	256.1	142.8	307.2	304.5	2.75	111.637		
900.0	899.4	891.4	891.4	1.6	1.6	177.95	256.1	142.8	315.0	311.9	3.10	101.696		
1,000.0	998.9	990.9	990.9	1.8	1.7	178.00	256.1	142.8	324.6	321.2	3.44	94.288		
1,100.0	1,098.3	1,091.4	1,091.4	2.1	1.9	178.32	255.3	144.0	335.5	331.7	3.79	88.465		
1,200.0	1,197.7	1,191.8	1,191.6	2.3	2.1	179.19	252.4	148.1	346.1	342.0	4.15	83.447		
1,300.0	1,297.1	1,291.7	1,291.2	2.6	2.3	-179.42	247.5	154.9	356.6	352.1	4.52	78.962		
1,400.0	1,396.4	1,391.1	1,389.9	2.8	2.5	-177.59	240.7	164.6	367.2	362.3	4.91	74.823		
1,500.0	1,495.8	1,489.5	1,487.1	3.1	2.7	-175.36	232.0	176.9	378.2	372.8	5.33	70.928		
1,600.0	1,595.2	1,587.1	1,583.0	3.3	3.0	-172.81	221.5	191.6	389.8	384.0	5.79	67.354		
1,700.0	1,694.6	1,684.7	1,678.8	3.6	3.3	-170.30	210.6	207.0	402.3	396.1	6.27	64.201		
1,800.0	1,794.0	1,782.4	1,774.6	3.8	3.6	-167.93	199.7	222.4	415.5	408.8	6.76	61.473		
1,900.0	1,893.3	1,880.1	1,870.5	4.1	4.0	-165.72	188.8	237.8	429.4	422.2	7.26	59.118		
2,000.0	1,992.7	1,977.7	1,966.3	4.3	4.3	-163.64	177.9	253.2	443.9	436.2	7.78	57.090		
2,100.0	2,092.1	2,075.4	2,062.1	4.6	4.6	-161.69	166.9	268.6	459.0	450.7	8.29	55.342		
2,200.0	2,191.5	2,173.0	2,157.9	4.8	5.0	-159.86	156.0	284.0	474.6	465.7	8.82	53.832		
2,300.0	2,290.9	2,270.7	2,253.7	5.1	5.3	-158.15	145.1	299.4	490.6	481.2	9.34	52.526 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
S29-T1N-R68W (Pratt/Waste Connections) - WILLIAM PELTIER 1A-20H (EXISTING) - ENCANA WELL												Offset Well Error:	0.0 ft
Survey Program: 911-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)			
16,900.0	8,036.0	9,552.0	7,724.3	150.9	45.5	-16.33	8,720.7	-841.7	434.7	370.7	64.00	6.792	
17,000.0	8,036.0	9,529.3	7,723.0	152.7	45.0	-12.30	8,726.5	-819.8	370.9	314.8	56.05	6.617	
17,100.0	8,036.0	9,507.8	7,721.8	154.4	44.5	-8.37	8,732.1	-799.0	324.3	275.1	49.13	6.600 SF	
17,200.0	8,036.0	9,484.8	7,720.6	156.1	44.0	-4.15	8,738.3	-776.9	302.9	259.3	43.57	6.951 ES	
17,221.0	8,036.0	9,479.8	7,720.3	156.5	43.9	-3.23	8,739.6	-772.1	302.2	259.4	42.76	7.067 CC	
17,245.3	8,036.0	9,473.9	7,720.0	156.9	43.7	-2.15	8,741.2	-766.5	303.1	261.1	42.04	7.209	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5189.0ft (Original Well Elev)

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Pratt 4C-29H-P168

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.31°

