



Project: DJ Wattenberg
Site: S29-T1N-R68W (Pratt/Waste Connections)
Well: Pratt 4C-29H-P168
Wellbore: HZ
Design: Plan #2

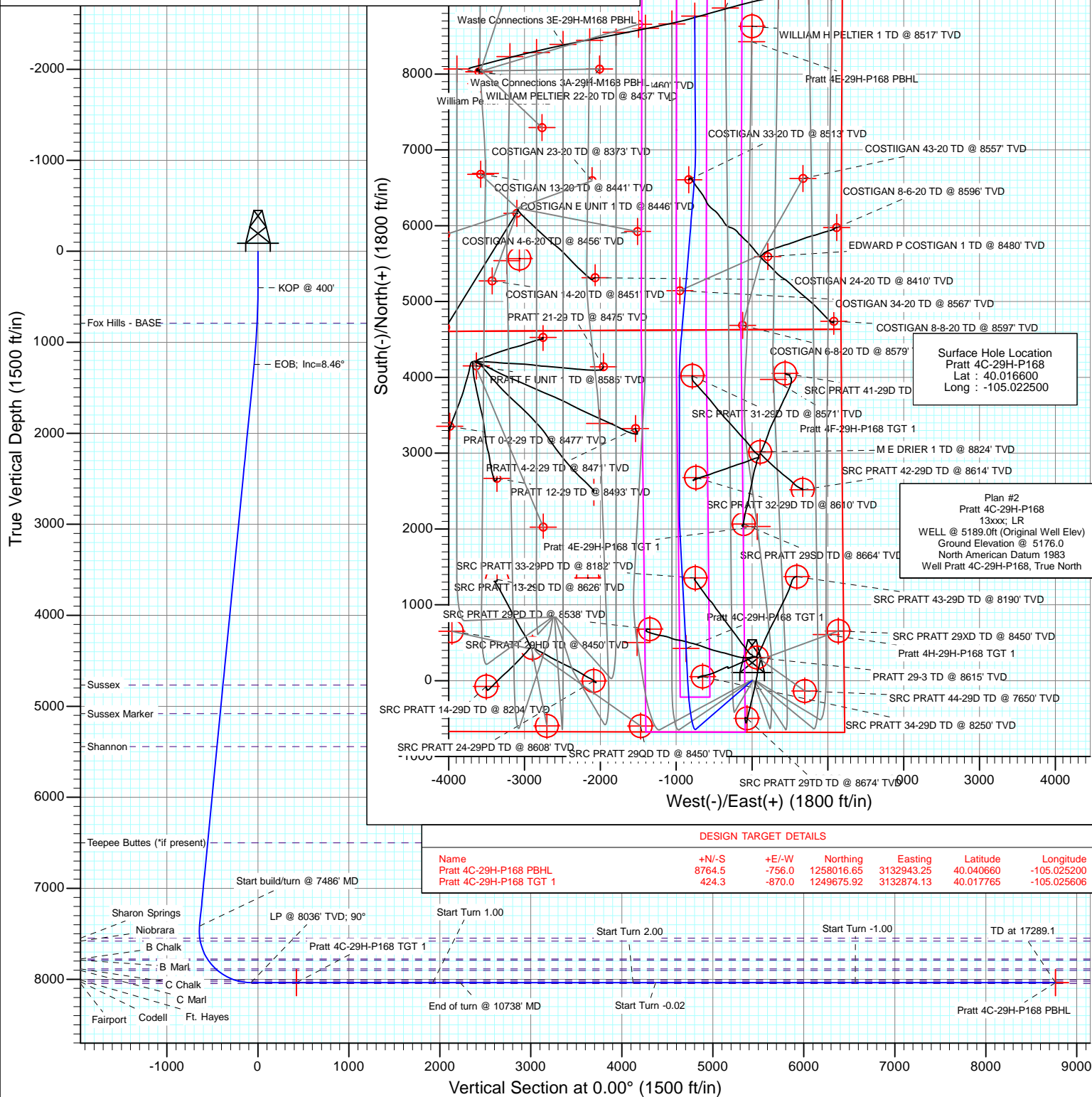


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1245.6	8.46	229.14	1242.5	-40.7	-47.1	1.00	229.14	-40.7	
4	7486.5	8.46	229.14	7415.6	-641.1	-741.2	0.00	0.00	-641.1	
5	8438.3	90.00	357.00	8036.0	-75.1	-843.8	10.00	127.55	-75.1	Pratt 4C-29H-P168 TGT 1
6	8938.3	90.00	357.00	8036.0	424.3	-870.0	0.00	0.00	424.3	
7	10438.3	90.00	357.00	8036.0	1922.2	-948.5	0.00	0.00	1922.2	
8	10738.3	90.00	0.00	8036.0	2222.1	-956.4	1.00	90.00	2222.1	
9	12638.3	90.00	0.00	8036.0	4122.1	-956.4	0.00	0.00	4122.1	
10	12888.3	90.00	5.00	8036.0	4371.8	-945.5	2.00	90.00	4371.8	
11	15088.3	90.00	4.50	8036.0	6564.2	-763.3	0.02	-90.00	6564.2	
12	15538.3	90.00	360.00	8036.0	7013.7	-745.6	1.00	-90.00	7013.7	
13	15572.5	90.00	359.66	8036.0	7047.9	-745.7	1.00	-90.00	7047.9	
14	17289.1	90.00	359.66	8036.0	8764.5	-756.0	0.00	0.00	8764.5	Pratt 4C-29H-P168 PBHL



Azimuths to True North
Magnetic North: 8.71°
Magnetic Field
Strength: 52694.8snT
Dip Angle: 66.63°
Date: 5/23/2013
Model: IGRF2010



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 #2		

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 #2			
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	
1,245.6	8.46	229.14	1,242.5	-40.7	-47.1	1.00	1.00	0.00	229.14	
7,486.5	8.46	229.14	7,415.6	-641.1	-741.2	0.00	0.00	0.00	0.00	
8,438.3	90.00	357.00	8,036.0	-75.1	-843.8	10.00	8.57	13.43	127.55	
8,938.3	90.00	357.00	8,036.0	424.3	-870.0	0.00	0.00	0.00	0.00	Pratt 4C-29H-P168 Tr
10,438.3	90.00	357.00	8,036.0	1,922.2	-948.5	0.00	0.00	0.00	0.00	
10,738.3	90.00	0.00	8,036.0	2,222.1	-956.4	1.00	0.00	1.00	90.00	
12,638.3	90.00	0.00	8,036.0	4,122.1	-956.4	0.00	0.00	0.00	0.00	
12,888.3	90.00	5.00	8,036.0	4,371.8	-945.5	2.00	0.00	2.00	90.00	
15,088.3	90.00	4.50	8,036.0	6,564.2	-763.3	0.02	0.00	-0.02	-90.00	
15,538.3	90.00	360.00	8,036.0	7,013.7	-745.6	1.00	0.00	-1.00	-90.00	
15,572.5	90.00	359.66	8,036.0	7,047.9	-745.7	1.00	0.00	-1.00	-90.00	
17,289.1	90.00	359.66	8,036.0	8,764.5	-756.0	0.00	0.00	0.00	0.00	Pratt 4C-29H-P168 PI

Planning Report

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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 #2		

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	229.14	500.0	-0.6	-0.7	-0.6	1.00	1.00	
600.0	2.00	229.14	600.0	-2.3	-2.6	-2.3	1.00	1.00	
700.0	3.00	229.14	699.9	-5.1	-5.9	-5.1	1.00	1.00	
789.3	3.89	229.14	789.0	-8.6	-10.0	-8.6	1.00	1.00	Fox Hills - BASE
800.0	4.00	229.14	799.7	-9.1	-10.6	-9.1	1.00	1.00	
900.0	5.00	229.14	899.4	-14.3	-16.5	-14.3	1.00	1.00	
1,000.0	6.00	229.14	998.9	-20.5	-23.7	-20.5	1.00	1.00	
1,100.0	7.00	229.14	1,098.3	-27.9	-32.3	-27.9	1.00	1.00	
1,200.0	8.00	229.14	1,197.4	-36.5	-42.2	-36.5	1.00	1.00	
1,245.6	8.46	229.14	1,242.5	-40.7	-47.1	-40.7	1.00	1.00	EOB; Inc=8.46°
1,300.0	8.46	229.14	1,296.3	-46.0	-53.2	-46.0	0.00	0.00	
1,400.0	8.46	229.14	1,395.3	-55.6	-64.3	-55.6	0.00	0.00	
1,500.0	8.46	229.14	1,494.2	-65.2	-75.4	-65.2	0.00	0.00	
1,600.0	8.46	229.14	1,593.1	-74.8	-86.5	-74.8	0.00	0.00	
1,700.0	8.46	229.14	1,692.0	-84.5	-97.7	-84.5	0.00	0.00	
1,800.0	8.46	229.14	1,790.9	-94.1	-108.8	-94.1	0.00	0.00	
1,900.0	8.46	229.14	1,889.8	-103.7	-119.9	-103.7	0.00	0.00	
2,000.0	8.46	229.14	1,988.7	-113.3	-131.0	-113.3	0.00	0.00	
2,100.0	8.46	229.14	2,087.6	-122.9	-142.1	-122.9	0.00	0.00	
2,200.0	8.46	229.14	2,186.6	-132.6	-153.3	-132.6	0.00	0.00	
2,300.0	8.46	229.14	2,285.5	-142.2	-164.4	-142.2	0.00	0.00	
2,400.0	8.46	229.14	2,384.4	-151.8	-175.5	-151.8	0.00	0.00	
2,500.0	8.46	229.14	2,483.3	-161.4	-186.6	-161.4	0.00	0.00	
2,600.0	8.46	229.14	2,582.2	-171.0	-197.8	-171.0	0.00	0.00	
2,700.0	8.46	229.14	2,681.1	-180.6	-208.9	-180.6	0.00	0.00	
2,800.0	8.46	229.14	2,780.0	-190.3	-220.0	-190.3	0.00	0.00	
2,900.0	8.46	229.14	2,878.9	-199.9	-231.1	-199.9	0.00	0.00	
3,000.0	8.46	229.14	2,977.9	-209.5	-242.2	-209.5	0.00	0.00	
3,100.0	8.46	229.14	3,076.8	-219.1	-253.4	-219.1	0.00	0.00	
3,200.0	8.46	229.14	3,175.7	-228.7	-264.5	-228.7	0.00	0.00	
3,300.0	8.46	229.14	3,274.6	-238.4	-275.6	-238.4	0.00	0.00	
3,400.0	8.46	229.14	3,373.5	-248.0	-286.7	-248.0	0.00	0.00	
3,500.0	8.46	229.14	3,472.4	-257.6	-297.9	-257.6	0.00	0.00	
3,600.0	8.46	229.14	3,571.3	-267.2	-309.0	-267.2	0.00	0.00	
3,700.0	8.46	229.14	3,670.3	-276.8	-320.1	-276.8	0.00	0.00	
3,800.0	8.46	229.14	3,769.2	-286.5	-331.2	-286.5	0.00	0.00	
3,900.0	8.46	229.14	3,868.1	-296.1	-342.3	-296.1	0.00	0.00	
4,000.0	8.46	229.14	3,967.0	-305.7	-353.5	-305.7	0.00	0.00	
4,100.0	8.46	229.14	4,065.9	-315.3	-364.6	-315.3	0.00	0.00	
4,200.0	8.46	229.14	4,164.8	-324.9	-375.7	-324.9	0.00	0.00	
4,300.0	8.46	229.14	4,263.7	-334.6	-386.8	-334.6	0.00	0.00	
4,400.0	8.46	229.14	4,362.6	-344.2	-398.0	-344.2	0.00	0.00	
4,500.0	8.46	229.14	4,461.6	-353.8	-409.1	-353.8	0.00	0.00	
4,600.0	8.46	229.14	4,560.5	-363.4	-420.2	-363.4	0.00	0.00	
4,700.0	8.46	229.14	4,659.4	-373.0	-431.3	-373.0	0.00	0.00	
4,800.0	8.46	229.14	4,758.3	-382.7	-442.4	-382.7	0.00	0.00	
4,807.8	8.46	229.14	4,766.0	-383.4	-443.3	-383.4	0.00	0.00	Sussex

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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 #2		

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	8.46	229.14	4,857.2	-392.3	-453.6	-392.3	0.00	0.00	
5,000.0	8.46	229.14	4,956.1	-401.9	-464.7	-401.9	0.00	0.00	
5,100.0	8.46	229.14	5,055.0	-411.5	-475.8	-411.5	0.00	0.00	
5,124.2	8.46	229.14	5,079.0	-413.8	-478.5	-413.8	0.00	0.00	Sussex Marker
5,200.0	8.46	229.14	5,153.9	-421.1	-486.9	-421.1	0.00	0.00	
5,300.0	8.46	229.14	5,252.9	-430.8	-498.1	-430.8	0.00	0.00	
5,400.0	8.46	229.14	5,351.8	-440.4	-509.2	-440.4	0.00	0.00	
5,492.2	8.46	229.14	5,443.0	-449.2	-519.4	-449.2	0.00	0.00	Shannon
5,500.0	8.46	229.14	5,450.7	-450.0	-520.3	-450.0	0.00	0.00	
5,600.0	8.46	229.14	5,549.6	-459.6	-531.4	-459.6	0.00	0.00	
5,700.0	8.46	229.14	5,648.5	-469.2	-542.5	-469.2	0.00	0.00	
5,800.0	8.46	229.14	5,747.4	-478.8	-553.7	-478.8	0.00	0.00	
5,900.0	8.46	229.14	5,846.3	-488.5	-564.8	-488.5	0.00	0.00	
6,000.0	8.46	229.14	5,945.2	-498.1	-575.9	-498.1	0.00	0.00	
6,100.0	8.46	229.14	6,044.2	-507.7	-587.0	-507.7	0.00	0.00	
6,200.0	8.46	229.14	6,143.1	-517.3	-598.2	-517.3	0.00	0.00	
6,300.0	8.46	229.14	6,242.0	-526.9	-609.3	-526.9	0.00	0.00	
6,400.0	8.46	229.14	6,340.9	-536.6	-620.4	-536.6	0.00	0.00	
6,500.0	8.46	229.14	6,439.8	-546.2	-631.5	-546.2	0.00	0.00	
6,560.8	8.46	229.14	6,500.0	-552.0	-638.3	-552.0	0.00	0.00	Teepee Buttes (*if present)
6,600.0	8.46	229.14	6,538.7	-555.8	-642.6	-555.8	0.00	0.00	
6,700.0	8.46	229.14	6,637.6	-565.4	-653.8	-565.4	0.00	0.00	
6,800.0	8.46	229.14	6,736.6	-575.0	-664.9	-575.0	0.00	0.00	
6,900.0	8.46	229.14	6,835.5	-584.7	-676.0	-584.7	0.00	0.00	
7,000.0	8.46	229.14	6,934.4	-594.3	-687.1	-594.3	0.00	0.00	
7,100.0	8.46	229.14	7,033.3	-603.9	-698.3	-603.9	0.00	0.00	
7,200.0	8.46	229.14	7,132.2	-613.5	-709.4	-613.5	0.00	0.00	
7,300.0	8.46	229.14	7,231.1	-623.1	-720.5	-623.1	0.00	0.00	
7,400.0	8.46	229.14	7,330.0	-632.8	-731.6	-632.8	0.00	0.00	
7,486.5	8.46	229.14	7,415.6	-641.1	-741.2	-641.1	0.00	0.00	Start build/turn @ 7486' MD
7,500.0	7.71	237.14	7,429.0	-642.2	-742.8	-642.2	10.00	-5.55	
7,600.0	9.10	309.85	7,528.1	-640.8	-754.5	-640.8	10.00	1.39	
7,619.2	10.48	317.63	7,547.0	-638.5	-756.8	-638.5	10.00	7.25	Sharon Springs
7,652.9	13.25	327.10	7,580.0	-633.0	-761.0	-633.0	10.00	8.20	Niobrara
7,700.0	17.47	335.10	7,625.4	-622.1	-766.9	-622.1	10.00	8.95	
7,800.0	26.96	343.66	7,717.9	-586.6	-779.6	-586.6	10.00	9.49	
7,867.2	33.49	346.78	7,776.0	-553.9	-788.2	-553.9	10.00	9.73	B Chalk
7,881.7	34.91	347.32	7,788.0	-545.9	-790.0	-545.9	10.00	9.78	B Marl
7,900.0	36.70	347.94	7,802.8	-535.5	-792.3	-535.5	10.00	9.80	
8,000.0	46.55	350.61	7,877.5	-470.3	-804.5	-470.3	10.00	9.84	
8,009.6	47.49	350.82	7,884.0	-463.4	-805.6	-463.4	10.00	9.87	C Chalk
8,036.9	50.19	351.39	7,902.0	-443.0	-808.8	-443.0	10.00	9.88	C Marl
8,100.0	56.43	352.53	7,939.7	-393.0	-815.8	-393.0	10.00	9.89	
8,200.0	66.34	354.05	7,987.5	-305.9	-826.0	-305.9	10.00	9.91	
8,254.6	71.76	354.78	8,007.0	-255.2	-831.0	-255.2	10.00	9.92	Ft. Hayes
8,300.0	76.27	355.36	8,019.5	-211.7	-834.7	-211.7	10.00	9.93	
8,330.7	79.32	355.73	8,026.0	-181.8	-837.1	-181.8	10.00	9.93	Codell
8,400.0	86.20	356.55	8,034.7	-113.2	-841.7	-113.2	10.00	9.93	
8,438.3	90.00	357.00	8,036.0	-75.1	-843.8	-75.1	10.00	9.93	LP @ 8036' TVD; 90°
8,500.0	90.00	357.00	8,036.0	-13.4	-847.1	-13.4	0.00	0.00	
8,600.0	90.00	357.00	8,036.0	86.4	-852.3	86.4	0.00	0.00	
8,700.0	90.00	357.00	8,036.0	186.3	-857.5	186.3	0.00	0.00	

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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 #2		

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	357.00	8,036.0	286.2	-862.8	286.2	0.00	0.00	
8,900.0	90.00	357.00	8,036.0	386.0	-868.0	386.0	0.00	0.00	
8,938.3	90.00	357.00	8,036.0	424.3	-870.0	424.3	0.00	0.00	
9,000.0	90.00	357.00	8,036.0	485.9	-873.2	485.9	0.00	0.00	
9,100.0	90.00	357.00	8,036.0	585.8	-878.5	585.8	0.00	0.00	
9,200.0	90.00	357.00	8,036.0	685.6	-883.7	685.6	0.00	0.00	
9,300.0	90.00	357.00	8,036.0	785.5	-888.9	785.5	0.00	0.00	
9,400.0	90.00	357.00	8,036.0	885.3	-894.2	885.3	0.00	0.00	
9,500.0	90.00	357.00	8,036.0	985.2	-899.4	985.2	0.00	0.00	
9,600.0	90.00	357.00	8,036.0	1,085.1	-904.6	1,085.1	0.00	0.00	
9,700.0	90.00	357.00	8,036.0	1,184.9	-909.9	1,184.9	0.00	0.00	
9,800.0	90.00	357.00	8,036.0	1,284.8	-915.1	1,284.8	0.00	0.00	
9,900.0	90.00	357.00	8,036.0	1,384.7	-920.3	1,384.7	0.00	0.00	
10,000.0	90.00	357.00	8,036.0	1,484.5	-925.6	1,484.5	0.00	0.00	
10,100.0	90.00	357.00	8,036.0	1,584.4	-930.8	1,584.4	0.00	0.00	
10,200.0	90.00	357.00	8,036.0	1,684.3	-936.0	1,684.3	0.00	0.00	
10,300.0	90.00	357.00	8,036.0	1,784.1	-941.3	1,784.1	0.00	0.00	
10,400.0	90.00	357.00	8,036.0	1,884.0	-946.5	1,884.0	0.00	0.00	
10,438.3	90.00	357.00	8,036.0	1,922.2	-948.5	1,922.2	0.00	0.00	Start Turn 1.00
10,500.0	90.00	357.62	8,036.0	1,983.9	-951.4	1,983.9	1.00	0.00	
10,600.0	90.00	358.62	8,036.0	2,083.8	-954.7	2,083.8	1.00	0.00	
10,700.0	90.00	359.62	8,036.0	2,183.8	-956.2	2,183.8	1.00	0.00	
10,738.3	90.00	0.00	8,036.0	2,222.1	-956.4	2,222.1	1.00	0.00	End of turn @ 10738' MD
10,800.0	90.00	0.00	8,036.0	2,283.8	-956.4	2,283.8	0.00	0.00	
10,900.0	90.00	0.00	8,036.0	2,383.8	-956.4	2,383.8	0.00	0.00	
11,000.0	90.00	0.00	8,036.0	2,483.8	-956.4	2,483.8	0.00	0.00	
11,100.0	90.00	0.00	8,036.0	2,583.8	-956.4	2,583.8	0.00	0.00	
11,200.0	90.00	0.00	8,036.0	2,683.8	-956.4	2,683.8	0.00	0.00	
11,300.0	90.00	0.00	8,036.0	2,783.8	-956.4	2,783.8	0.00	0.00	
11,400.0	90.00	0.00	8,036.0	2,883.8	-956.4	2,883.8	0.00	0.00	
11,500.0	90.00	0.00	8,036.0	2,983.8	-956.4	2,983.8	0.00	0.00	
11,600.0	90.00	0.00	8,036.0	3,083.8	-956.4	3,083.8	0.00	0.00	
11,700.0	90.00	0.00	8,036.0	3,183.8	-956.4	3,183.8	0.00	0.00	
11,800.0	90.00	0.00	8,036.0	3,283.8	-956.4	3,283.8	0.00	0.00	
11,900.0	90.00	0.00	8,036.0	3,383.8	-956.4	3,383.8	0.00	0.00	
12,000.0	90.00	0.00	8,036.0	3,483.8	-956.4	3,483.8	0.00	0.00	
12,100.0	90.00	0.00	8,036.0	3,583.8	-956.4	3,583.8	0.00	0.00	
12,200.0	90.00	0.00	8,036.0	3,683.8	-956.4	3,683.8	0.00	0.00	
12,300.0	90.00	0.00	8,036.0	3,783.8	-956.4	3,783.8	0.00	0.00	
12,400.0	90.00	0.00	8,036.0	3,883.8	-956.4	3,883.8	0.00	0.00	
12,500.0	90.00	0.00	8,036.0	3,983.8	-956.4	3,983.8	0.00	0.00	
12,600.0	90.00	0.00	8,036.0	4,083.8	-956.4	4,083.8	0.00	0.00	
12,638.3	90.00	0.00	8,036.0	4,122.1	-956.4	4,122.1	0.00	0.00	Start Turn 2.00
12,700.0	90.00	1.23	8,036.0	4,183.8	-955.7	4,183.8	2.00	0.00	
12,800.0	90.00	3.23	8,036.0	4,283.7	-951.8	4,283.7	2.00	0.00	
12,888.3	90.00	5.00	8,036.0	4,371.8	-945.5	4,371.8	2.00	0.00	Start Turn -0.02
12,900.0	90.00	5.00	8,036.0	4,383.4	-944.4	4,383.4	0.02	0.00	
13,000.0	90.00	4.97	8,036.0	4,483.0	-935.7	4,483.0	0.02	0.00	
13,100.0	90.00	4.95	8,036.0	4,582.7	-927.1	4,582.7	0.02	0.00	
13,200.0	90.00	4.93	8,036.0	4,682.3	-918.5	4,682.3	0.02	0.00	
13,300.0	90.00	4.91	8,036.0	4,781.9	-909.9	4,781.9	0.02	0.00	
13,400.0	90.00	4.88	8,036.0	4,881.6	-901.4	4,881.6	0.02	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 #2		

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
13,500.0	90.00	4.86	8,036.0	4,981.2	-892.9	4,981.2	0.02	0.00	
13,600.0	90.00	4.84	8,036.0	5,080.8	-884.4	5,080.8	0.02	0.00	
13,700.0	90.00	4.82	8,036.0	5,180.5	-876.0	5,180.5	0.02	0.00	
13,800.0	90.00	4.79	8,036.0	5,280.1	-867.6	5,280.1	0.02	0.00	
13,900.0	90.00	4.77	8,036.0	5,379.8	-859.3	5,379.8	0.02	0.00	
14,000.0	90.00	4.75	8,036.0	5,479.5	-851.0	5,479.5	0.02	0.00	
14,100.0	90.00	4.72	8,036.0	5,579.1	-842.7	5,579.1	0.02	0.00	
14,200.0	90.00	4.70	8,036.0	5,678.8	-834.5	5,678.8	0.02	0.00	
14,300.0	90.00	4.68	8,036.0	5,778.4	-826.4	5,778.4	0.02	0.00	
14,400.0	90.00	4.66	8,036.0	5,878.1	-818.2	5,878.1	0.02	0.00	
14,500.0	90.00	4.63	8,036.0	5,977.8	-810.1	5,977.8	0.02	0.00	
14,600.0	90.00	4.61	8,036.0	6,077.5	-802.1	6,077.5	0.02	0.00	
14,700.0	90.00	4.59	8,036.0	6,177.1	-794.0	6,177.1	0.02	0.00	
14,800.0	90.00	4.57	8,036.0	6,276.8	-786.1	6,276.8	0.02	0.00	
14,900.0	90.00	4.54	8,036.0	6,376.5	-778.1	6,376.5	0.02	0.00	
15,000.0	90.00	4.52	8,036.0	6,476.2	-770.2	6,476.2	0.02	0.00	
15,088.3	90.00	4.50	8,036.0	6,564.2	-763.3	6,564.2	0.02	0.00	Start Turn -1.00
15,100.0	90.00	4.38	8,036.0	6,575.9	-762.4	6,575.9	1.00	0.00	
15,200.0	90.00	3.38	8,036.0	6,675.6	-755.6	6,675.6	1.00	0.00	
15,300.0	90.00	2.38	8,036.0	6,775.5	-750.6	6,775.5	1.00	0.00	
15,400.0	90.00	1.38	8,036.0	6,875.5	-747.3	6,875.5	1.00	0.00	
15,500.0	90.00	0.38	8,036.0	6,975.4	-745.7	6,975.4	1.00	0.00	
15,538.3	90.00	360.00	8,036.0	7,013.7	-745.6	7,013.7	1.00	0.00	
15,572.5	90.00	359.66	8,036.0	7,047.9	-745.7	7,047.9	1.00	0.00	
15,600.0	90.00	359.66	8,036.0	7,075.4	-745.9	7,075.4	0.00	0.00	
15,700.0	90.00	359.66	8,036.0	7,175.4	-746.5	7,175.4	0.00	0.00	
15,800.0	90.00	359.66	8,036.0	7,275.4	-747.1	7,275.4	0.00	0.00	
15,900.0	90.00	359.66	8,036.0	7,375.4	-747.7	7,375.4	0.00	0.00	
16,000.0	90.00	359.66	8,036.0	7,475.4	-748.3	7,475.4	0.00	0.00	
16,100.0	90.00	359.66	8,036.0	7,575.4	-748.9	7,575.4	0.00	0.00	
16,200.0	90.00	359.66	8,036.0	7,675.4	-749.5	7,675.4	0.00	0.00	
16,300.0	90.00	359.66	8,036.0	7,775.4	-750.1	7,775.4	0.00	0.00	
16,400.0	90.00	359.66	8,036.0	7,875.4	-750.7	7,875.4	0.00	0.00	
16,500.0	90.00	359.66	8,036.0	7,975.4	-751.3	7,975.4	0.00	0.00	
16,600.0	90.00	359.66	8,036.0	8,075.4	-751.9	8,075.4	0.00	0.00	
16,700.0	90.00	359.66	8,036.0	8,175.4	-752.4	8,175.4	0.00	0.00	
16,800.0	90.00	359.66	8,036.0	8,275.4	-753.0	8,275.4	0.00	0.00	
16,900.0	90.00	359.66	8,036.0	8,375.4	-753.6	8,375.4	0.00	0.00	
17,000.0	90.00	359.66	8,036.0	8,475.4	-754.2	8,475.4	0.00	0.00	
17,100.0	90.00	359.66	8,036.0	8,575.4	-754.8	8,575.4	0.00	0.00	
17,200.0	90.00	359.66	8,036.0	8,675.4	-755.4	8,675.4	0.00	0.00	
17,289.1	90.00	359.66	8,036.0	8,764.5	-756.0	8,764.5	0.00	0.00	TD at 17289.1

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 #2		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Pratt 4C-29H-P168 PBH	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									
Pratt 4C-29H-P168 TGT	0.00	0.00	8,036.0	424.3	-870.0	1,249,675.92	3,132,874.13	40.017765	-105.025606
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
789.3	789.0	Fox Hills - BASE				
4,807.8	4,766.0	Sussex				
5,124.2	5,079.0	Sussex Marker				
5,492.2	5,443.0	Shannon				
6,560.8	6,500.0	Teepee Buttes (*if present)				
7,619.2	7,547.0	Sharon Springs				
7,652.9	7,580.0	Niobrara				
7,867.2	7,776.0	B Chalk				
7,881.7	7,788.0	B Marl				
8,009.6	7,884.0	C Chalk				
8,036.9	7,902.0	C Marl				
8,254.6	8,007.0	Ft. Hayes				
8,330.7	8,026.0	Codell				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
400.0	400.0	0.0	0.0	KOP @ 400'
1,245.6	1,242.5	-40.7	-47.1	EOB; Inc=8.46°
7,486.5	7,415.6	-641.1	-741.2	Start build/turn @ 7486' MD
8,438.3	8,036.0	-75.1	-843.8	LP @ 8036' TVD; 90°
10,438.3	8,036.0	424.3	-870.0	Start Turn 1.00
10,738.3	8,036.0	1,922.2	-948.5	End of turn @ 10738' MD
12,638.3	8,036.0	2,222.1	-956.4	Start Turn 2.00
12,888.3	8,036.0	4,122.1	-956.4	Start Turn -0.02
15,088.3	8,036.0	4,371.8	-945.5	Start Turn -1.00
17,289.1	8,036.0	6,564.2	-763.3	TD at 17289.1

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S29-T1N-R68W (Pratt/Waste Connections)

Pratt 4C-29H-P168

Hz

Plan #2

Anticollision Report

14 October, 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 #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	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	10/14/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	17,289.1	Plan #2 (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 #2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance		Separation Factor	Warning
Offset Well - Wellbore - Design			Between Centres (ft)	Between Ellipses (ft)		
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	15,131.7	8,262.8	70.8	-69.1	0.506	Level 1, CC, ES, SF
COSTIGAN 34-20 (EXISTING) - ENCANA WELL - PLAN	13,655.4	8,163.9	72.9	-36.0	0.670	Level 1, 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 4-6-20 (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						Out of range
COSTIGAN 6-8-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
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
EDWARD P COSTIGAN 1 (EXISTING) - ENCANA WELL						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
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 21-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 22-29 (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	2,200.0	2,174.6	489.6	481.8	62.366	SF
PRATT 4-2-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
PRATT 4-2-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
Pratt 4A-29H-P168 (DROP) - Hz - Plan #1	200.0	200.0	19.6	19.0	30.036	CC, ES
Pratt 4A-29H-P168 (DROP) - Hz - Plan #1	13,300.0	13,403.1	495.6	325.4	2.911	SF
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	14,300.0	13,887.8	497.0	394.0	4.827	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	700.0	700.2	15.5	13.1	6.449	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	700.0	699.9	26.1	23.7	10.856	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	699.2	38.7	36.3	16.094	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	697.9	51.2	48.8	21.286	SF
Pratt 4H-29H-P168 (DROP) - Hz - Plan #1	300.0	300.0	50.4	49.4	50.324	CC, ES
Pratt 4H-29H-P168 (DROP) - Hz - Plan #1	700.0	696.1	68.2	65.8	28.356	SF
PRATT F UNIT 1 (EXISTING) - ENCANA WELL - NO SU						Out of range
SRC PRATT 13-29D (EXISTING) - SYNERGY WELL - S						Out of range

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 #2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S29-T1N-R68W (Pratt/Waste Connections)						
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	653.5	668.9	310.2	307.7	120.456	CC, ES
SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SU	9,300.0	8,259.9	487.5	449.4	12.807	SF
SRC PRATT 29QD (EXISTING) - SYNERGY WELL - PL						Out of range
SRC PRATT 29QD (EXISTING) - SYNERGY WELL - PL						Out of range
SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SU						Out of range
SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SU						Out of range
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	2,746.5	2,811.7	274.3	261.8	21.954	CC
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	3,000.0	3,066.7	275.5	260.8	18.715	ES
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	4,200.0	4,248.4	348.2	322.7	13.661	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	1,202.4	495.1	490.3	103.068	SF
SRC PRATT 31-29D (EXISTING) - SYNERGY WELL - S	12,535.7	8,259.9	166.3	69.1	1.711	CC, ES, SF
SRC PRATT 32-29D (EXISTING) - SYNERGY WELL - S	11,176.1	8,178.4	201.9	136.2	3.072	CC, ES, SF
SRC PRATT 33-29PD (EXISTING) - SYNERGY WELL -	9,857.3	8,203.0	169.0	115.6	3.164	CC, ES, SF
SRC PRATT 34-29D (EXISTING) - SYNERGY WELL - S	8,554.3	8,113.3	193.2	163.5	6.509	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	476.117	ES
SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - S	1,200.0	1,089.4	493.3	489.2	121.080	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	2,000.0	1,963.9	482.1	474.5	63.360	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 3F-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
Waste Connections 3G-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 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	9,522.4	341.1	287.6	6.371	SF
WILLIAM PELTIER 1A-20H (EXISTING) - ENCANA WEL	17,264.1	9,480.6	302.1	259.2	7.045	CC, ES
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
WILLIAM PELTIER 4-2-20 (EXISTING) - ENCANA WELL						Out of range

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 #2	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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
14,700.0	8,036.0	8,268.7	8,071.3	112.1	28.7	-94.25	6,612.5	-830.7	436.9	305.3	131.62	3.319		
14,800.0	8,036.0	8,267.3	8,069.9	113.9	28.7	-93.17	6,612.5	-830.6	338.6	205.1	133.54	2.536		
14,900.0	8,036.0	8,265.9	8,068.6	115.6	28.7	-92.08	6,612.5	-830.6	241.8	106.4	135.42	1.785		
15,000.0	8,036.0	8,264.6	8,067.2	117.3	28.7	-90.99	6,612.5	-830.6	149.1	11.8	137.26	1.086	Level 2	
15,088.3	8,036.0	8,263.4	8,066.0	118.8	28.7	-90.02	6,612.5	-830.6	82.9	-56.0	138.85	0.597	Level 1	
15,100.0	8,036.0	8,263.2	8,065.9	119.0	28.7	-89.89	6,612.5	-830.6	77.5	-61.7	139.13	0.557	Level 1	
15,131.7	8,036.0	8,262.8	8,065.4	119.5	28.7	-89.54	6,612.5	-830.6	70.8	-69.1	139.88	0.506	Level 1, CC, ES, SF	
15,200.0	8,036.0	8,261.9	8,064.5	120.7	28.7	-88.80	6,612.5	-830.6	98.0	-43.4	141.46	0.693	Level 1	
15,300.0	8,036.0	8,260.5	8,063.2	122.4	28.7	-87.79	6,612.6	-830.6	181.6	37.9	143.71	1.263	Level 3	
15,400.0	8,036.0	8,259.2	8,061.9	124.2	28.7	-86.92	6,612.6	-830.6	275.8	129.9	145.90	1.890		
15,500.0	8,036.0	8,257.9	8,060.6	125.9	28.7	-86.22	6,612.6	-830.6	372.7	224.6	148.03	2.518		
15,538.3	8,036.0	8,257.4	8,060.1	126.5	28.7	-86.00	6,612.6	-830.6	410.1	261.2	148.83	2.755		
15,572.5	8,036.0	8,257.0	8,059.6	127.1	28.7	-85.82	6,612.6	-830.6	443.6	294.0	149.55	2.966		
15,600.0	8,036.0	8,256.6	8,059.3	127.6	28.7	-85.59	6,612.6	-830.6	470.6	320.6	149.99	3.137		

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 #2	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		
13,200.0	8,036.0	8,163.9	8,059.0	86.8	24.8	-90.00	5,142.2	-952.4	461.1	360.2	100.93	4.569		
13,300.0	8,036.0	8,163.9	8,059.0	88.5	24.8	-90.00	5,142.2	-952.4	362.8	260.1	102.66	3.533		
13,400.0	8,036.0	8,163.9	8,059.0	90.1	24.8	-90.00	5,142.2	-952.4	265.6	161.2	104.40	2.544		
13,500.0	8,036.0	8,163.9	8,059.0	91.8	24.8	-90.00	5,142.2	-952.4	171.6	65.5	106.14	1.617		
13,600.0	8,036.0	8,163.9	8,059.0	93.5	24.8	-90.00	5,142.2	-952.4	91.5	-16.3	107.87	0.849	Level 1	
13,655.4	8,036.0	8,163.9	8,059.0	94.4	24.8	-90.00	5,142.2	-952.4	72.9	-36.0	108.84	0.670	Level 1, CC, ES, SF	
13,700.0	8,036.0	8,163.9	8,059.0	95.2	24.8	-90.00	5,142.2	-952.4	85.4	-24.2	109.61	0.779	Level 1	
13,800.0	8,036.0	8,163.9	8,059.0	96.9	24.8	-90.00	5,142.2	-952.4	161.9	50.5	111.35	1.454	Level 3	
13,900.0	8,036.0	8,163.9	8,059.0	98.6	24.8	-90.00	5,142.2	-952.4	255.2	142.1	113.10	2.256		
14,000.0	8,036.0	8,163.9	8,059.0	100.2	24.8	-90.00	5,142.2	-952.4	352.2	237.3	114.84	3.067		
14,100.0	8,036.0	8,163.9	8,059.0	101.9	24.8	-90.00	5,142.2	-952.4	450.5	333.9	116.58	3.864		

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 #2	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				Total		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	Separation Factor			
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	142.84	306.0	64.4	313.4	311.7	1.70	184.143			
600.0	600.0	588.0	588.0	1.0	1.0	143.11	306.0	64.4	315.5	313.4	2.05	153.759			
700.0	699.9	687.9	687.9	1.2	1.2	143.56	306.0	64.4	319.0	316.6	2.40	132.721			
800.0	799.7	787.7	787.7	1.4	1.4	144.17	306.0	64.4	323.9	321.2	2.76	117.462			
900.0	899.4	887.4	887.4	1.6	1.5	144.93	306.0	64.4	330.3	327.2	3.12	106.039			
1,000.0	998.9	986.9	986.9	1.8	1.7	145.82	306.0	64.4	338.2	334.8	3.48	97.301			
1,100.0	1,098.3	1,086.3	1,086.3	2.1	1.9	146.81	306.0	64.4	347.7	343.8	3.84	90.527			
1,200.0	1,197.4	1,185.4	1,185.4	2.3	2.1	147.89	306.0	64.4	358.7	354.5	4.21	85.242			
1,245.6	1,242.5	1,230.5	1,230.5	2.5	2.1	148.41	306.0	64.4	364.2	359.9	4.38	83.243			
1,300.0	1,296.3	1,284.3	1,284.3	2.6	2.2	149.05	306.0	64.4	371.1	366.5	4.58	81.068			
1,400.0	1,395.3	1,383.3	1,383.3	2.9	2.4	150.18	306.0	64.4	383.8	378.9	4.95	77.572			
1,500.0	1,494.2	1,482.2	1,482.2	3.2	2.6	151.23	306.0	64.4	396.7	391.4	5.32	74.610			
1,600.0	1,593.1	1,581.1	1,581.1	3.5	2.8	152.22	306.0	64.4	409.7	404.0	5.68	72.076			
1,700.0	1,692.0	1,680.0	1,680.0	3.8	2.9	153.15	306.0	64.4	422.8	416.7	6.05	69.889			
1,800.0	1,790.9	1,778.9	1,778.9	4.1	3.1	154.02	306.0	64.4	436.0	429.5	6.41	67.985			
1,900.0	1,889.8	1,877.8	1,877.8	4.4	3.3	154.84	306.0	64.4	449.2	442.5	6.77	66.317			
2,000.0	1,988.7	1,976.7	1,976.7	4.7	3.5	155.61	306.0	64.4	462.6	455.5	7.13	64.844			
2,100.0	2,087.6	2,075.6	2,075.6	5.0	3.6	156.34	306.0	64.4	476.1	468.6	7.49	63.535			
2,200.0	2,186.6	2,174.6	2,174.6	5.3	3.8	157.03	306.0	64.4	489.6	481.8	7.85	62.366 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4A-29H-P168 (DROP) - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-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			
0.0	0.0	0.0	0.0	0.0	0.0	-89.96	0.0	-19.6	19.6					
100.0	100.0	100.0	100.0	0.2	0.2	-89.96	0.0	-19.6	19.6	19.3	0.30		64.560	
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-19.6	19.6	19.0	0.65		30.036 CC, ES	
300.0	300.0	299.7	299.7	0.5	0.5	-91.12	-0.4	-20.4	20.4	19.4	1.00		20.347	
400.0	400.0	399.3	399.3	0.7	0.7	-94.13	-1.6	-22.7	22.7	21.4	1.35		16.824	
500.0	500.0	498.9	498.7	0.9	0.9	33.94	-3.7	-26.5	26.0	24.3	1.70		15.300	
600.0	600.0	598.4	598.0	1.0	1.1	32.44	-6.6	-31.8	29.5	27.5	2.05		14.384	
700.0	699.9	697.8	697.1	1.2	1.3	31.86	-10.3	-38.6	33.2	30.8	2.41		13.788	
800.0	799.7	797.1	796.0	1.4	1.5	31.91	-14.8	-47.0	37.0	34.2	2.77		13.377	
900.0	899.4	896.4	894.7	1.6	1.8	32.44	-20.1	-56.8	41.0	37.9	3.13		13.076	
1,000.0	998.9	995.6	993.1	1.8	2.0	33.30	-26.2	-68.1	45.1	41.6	3.51		12.842	
1,100.0	1,098.3	1,094.8	1,091.1	2.1	2.3	34.39	-33.1	-81.0	49.4	45.5	3.91		12.645	
1,200.0	1,197.4	1,193.8	1,188.9	2.3	2.6	35.66	-40.8	-95.3	53.9	49.6	4.33		12.464	
1,245.6	1,242.5	1,239.0	1,233.3	2.5	2.8	36.28	-44.6	-102.3	56.1	51.5	4.53		12.383	
1,300.0	1,296.3	1,292.8	1,286.2	2.6	3.0	36.91	-49.4	-111.0	58.8	54.1	4.77		12.340	
1,400.0	1,395.3	1,392.0	1,383.5	2.9	3.4	37.48	-58.6	-128.2	65.1	59.9	5.21		12.478	
1,500.0	1,494.2	1,491.8	1,481.2	3.2	3.7	37.83	-68.1	-145.8	71.6	65.9	5.67		12.635	
1,600.0	1,593.1	1,591.6	1,579.0	3.5	4.1	38.12	-77.6	-163.3	78.1	72.0	6.12		12.758	
1,700.0	1,692.0	1,691.4	1,676.8	3.8	4.5	38.37	-87.1	-180.9	84.7	78.1	6.59		12.856	
1,800.0	1,790.9	1,791.2	1,774.5	4.1	4.9	38.58	-96.6	-198.5	91.2	84.2	7.05		12.935	
1,900.0	1,889.8	1,891.0	1,872.3	4.4	5.3	38.77	-106.1	-216.0	97.7	90.2	7.52		13.000	
2,000.0	1,988.7	1,990.7	1,970.1	4.7	5.6	38.93	-115.6	-233.6	104.3	96.3	7.99		13.053	
2,100.0	2,087.6	2,090.5	2,067.9	5.0	6.0	39.07	-125.1	-251.2	110.8	102.4	8.46		13.097	
2,200.0	2,186.6	2,190.3	2,165.6	5.3	6.4	39.20	-134.6	-268.7	117.4	108.4	8.94		13.134	
2,300.0	2,285.5	2,290.1	2,263.4	5.6	6.8	39.31	-144.0	-286.3	123.9	114.5	9.41		13.165	
2,400.0	2,384.4	2,389.9	2,361.2	5.9	7.2	39.41	-153.5	-303.9	130.4	120.6	9.89		13.192	
2,500.0	2,483.3	2,489.7	2,458.9	6.2	7.6	39.51	-163.0	-321.4	137.0	126.6	10.37		13.215	
2,600.0	2,582.2	2,589.5	2,556.7	6.5	8.0	39.59	-172.5	-339.0	143.5	132.7	10.84		13.235	
2,700.0	2,681.1	2,689.2	2,654.5	6.8	8.4	39.67	-182.0	-356.5	150.1	138.7	11.32		13.252	
2,800.0	2,780.0	2,789.0	2,752.2	7.1	8.8	39.74	-191.5	-374.1	156.6	144.8	11.80		13.267	
2,900.0	2,878.9	2,888.8	2,850.0	7.4	9.1	39.80	-201.0	-391.7	163.2	150.9	12.29		13.280	
3,000.0	2,977.9	2,988.6	2,947.8	7.8	9.5	39.86	-210.5	-409.2	169.7	156.9	12.77		13.291	
3,100.0	3,076.8	3,088.4	3,045.5	8.1	9.9	39.91	-219.9	-426.8	176.2	163.0	13.25		13.301	
3,200.0	3,175.7	3,188.2	3,143.3	8.4	10.3	39.97	-229.4	-444.4	182.8	169.0	13.73		13.310	
3,300.0	3,274.6	3,288.0	3,241.1	8.7	10.7	40.01	-238.9	-461.9	189.3	175.1	14.22		13.318	
3,400.0	3,373.5	3,387.7	3,338.8	9.0	11.1	40.06	-248.4	-479.5	195.9	181.2	14.70		13.326	
3,500.0	3,472.4	3,487.5	3,436.6	9.3	11.5	40.10	-257.9	-497.1	202.4	187.2	15.18		13.332	
3,600.0	3,571.3	3,587.3	3,534.4	9.6	11.9	40.14	-267.4	-514.6	209.0	193.3	15.67		13.338	
3,700.0	3,670.3	3,687.1	3,632.1	9.9	12.3	40.17	-276.9	-532.2	215.5	199.3	16.15		13.343	
3,800.0	3,769.2	3,786.9	3,729.9	10.2	12.7	40.21	-286.4	-549.8	222.0	205.4	16.64		13.348	
3,900.0	3,868.1	3,886.7	3,827.7	10.5	13.1	40.24	-295.8	-567.3	228.6	211.5	17.12		13.352	
4,000.0	3,967.0	3,986.5	3,925.4	10.9	13.5	40.27	-305.3	-584.9	235.1	217.5	17.61		13.356	
4,100.0	4,065.9	4,086.2	4,023.2	11.2	13.9	40.30	-314.8	-602.5	241.7	223.6	18.09		13.359	
4,200.0	4,164.8	4,186.0	4,121.0	11.5	14.2	40.33	-324.3	-620.0	248.2	229.6	18.58		13.362	
4,300.0	4,263.7	4,285.8	4,218.8	11.8	14.6	40.35	-333.8	-637.6	254.8	235.7	19.06		13.365	
4,400.0	4,362.6	4,385.6	4,316.5	12.1	15.0	40.38	-343.3	-655.2	261.3	241.8	19.55		13.368	
4,500.0	4,461.6	4,485.4	4,414.3	12.4	15.4	40.40	-352.8	-672.7	267.8	247.8	20.03		13.370	
4,600.0	4,560.5	4,585.2	4,512.1	12.7	15.8	40.42	-362.3	-690.3	274.4	253.9	20.52		13.372	
4,700.0	4,659.4	4,685.0	4,609.8	13.0	16.2	40.45	-371.8	-707.8	280.9	259.9	21.01		13.374	
4,800.0	4,758.3	4,784.7	4,707.6	13.3	16.6	40.47	-381.2	-725.4	287.5	266.0	21.49		13.376	
4,900.0	4,857.2	4,884.5	4,805.4	13.6	17.0	40.49	-390.7	-743.0	294.0	272.0	21.98		13.378	
5,000.0	4,956.1	4,984.3	4,903.1	14.0	17.4	40.50	-400.2	-760.5	300.6	278.1	22.46		13.380	

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 #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4A-29H-P168 (DROP) - 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)				
5,100.0	5,055.0	5,084.1	5,000.9	14.3	17.8	40.52	-409.7	-778.1	307.1	284.2	22.95	13.381		
5,200.0	5,153.9	5,183.9	5,098.7	14.6	18.2	40.54	-419.2	-795.7	313.7	290.2	23.44	13.382		
5,300.0	5,252.9	5,283.7	5,196.4	14.9	18.6	40.56	-428.7	-813.2	320.2	296.3	23.92	13.384		
5,400.0	5,351.8	5,383.5	5,294.2	15.2	19.0	40.57	-438.2	-830.8	326.7	302.3	24.41	13.385		
5,500.0	5,450.7	5,483.2	5,392.0	15.5	19.4	40.59	-447.7	-848.4	333.3	308.4	24.90	13.386		
5,600.0	5,549.6	5,583.0	5,489.7	15.8	19.8	40.60	-457.1	-865.9	339.8	314.4	25.39	13.387		
5,700.0	5,648.5	5,682.8	5,587.5	16.1	20.2	40.62	-466.6	-883.5	346.4	320.5	25.87	13.388		
5,800.0	5,747.4	5,782.6	5,685.3	16.4	20.5	40.63	-476.1	-901.1	352.9	326.6	26.36	13.389		
5,900.0	5,846.3	5,882.4	5,783.0	16.8	20.9	40.64	-485.6	-918.6	359.5	332.6	26.85	13.389		
6,000.0	5,945.2	5,982.2	5,880.8	17.1	21.3	40.65	-495.1	-936.2	366.0	338.7	27.33	13.390		
6,100.0	6,044.2	6,082.0	5,978.6	17.4	21.7	40.67	-504.6	-953.8	372.6	344.7	27.82	13.391		
6,200.0	6,143.1	6,181.7	6,076.3	17.7	22.1	40.68	-514.1	-971.3	379.1	350.8	28.31	13.391		
6,300.0	6,242.0	6,281.5	6,174.1	18.0	22.5	40.69	-523.6	-988.9	385.6	356.8	28.80	13.392		
6,400.0	6,340.9	6,381.3	6,271.9	18.3	22.9	40.70	-533.0	-1,006.5	392.2	362.9	29.28	13.392		
6,500.0	6,439.8	6,481.1	6,369.7	18.6	23.3	40.71	-542.5	-1,024.0	398.7	369.0	29.77	13.393		
6,600.0	6,538.7	6,580.9	6,467.4	18.9	23.7	40.72	-552.0	-1,041.6	405.3	375.0	30.26	13.393		
6,700.0	6,637.6	6,680.7	6,565.2	19.2	24.1	40.73	-561.5	-1,059.1	411.8	381.1	30.75	13.394		
6,800.0	6,736.6	6,780.5	6,663.0	19.6	24.5	40.74	-571.0	-1,076.7	418.4	387.1	31.23	13.394		
6,900.0	6,835.5	6,880.2	6,760.7	19.9	24.9	40.75	-580.5	-1,094.3	424.9	393.2	31.72	13.395		
7,000.0	6,934.4	6,980.0	6,858.5	20.2	25.3	40.76	-590.0	-1,111.8	431.5	399.2	32.21	13.395		
7,100.0	7,033.3	7,079.8	6,956.3	20.5	25.7	40.77	-599.5	-1,129.4	438.0	405.3	32.70	13.395		
7,200.0	7,132.2	7,179.6	7,054.0	20.8	26.1	40.78	-608.9	-1,147.0	444.5	411.4	33.19	13.396		
7,300.0	7,231.1	7,279.4	7,151.8	21.1	26.5	40.78	-618.4	-1,164.5	451.1	417.4	33.67	13.396		
7,400.0	7,330.0	7,379.2	7,249.6	21.4	26.8	40.79	-627.9	-1,182.1	457.6	423.5	34.16	13.396		
7,486.5	7,415.6	7,465.5	7,334.1	21.7	27.2	40.80	-636.1	-1,197.3	463.3	428.7	34.58	13.396		
7,500.0	7,429.0	7,479.0	7,347.3	21.7	27.2	32.95	-637.4	-1,199.7	464.2	429.5	34.67	13.387		
7,550.0	7,478.6	7,528.7	7,396.1	21.8	27.4	-6.66	-642.1	-1,208.4	467.3	432.4	34.81	13.423		
7,600.0	7,528.1	7,577.2	7,443.6	21.9	27.6	-39.87	-646.7	-1,217.0	470.2	435.5	34.68	13.556		
7,650.0	7,577.2	7,621.4	7,487.0	21.9	27.8	-56.86	-648.6	-1,225.1	473.4	439.0	34.43	13.751		
7,700.0	7,625.4	7,666.1	7,530.8	21.9	27.9	-65.90	-647.2	-1,233.9	477.1	443.1	34.10	13.993		
7,750.0	7,672.5	7,711.4	7,574.8	21.9	28.0	-71.42	-642.2	-1,243.3	481.4	447.7	33.71	14.280		
7,800.0	7,717.9	7,757.4	7,618.9	21.9	28.1	-75.20	-633.5	-1,253.2	486.1	452.8	33.28	14.608		
7,850.0	7,761.5	7,804.0	7,662.6	21.8	28.2	-77.98	-621.1	-1,263.7	491.3	458.5	32.81	14.972		
7,900.0	7,802.8	7,851.5	7,705.7	21.7	28.3	-80.15	-604.9	-1,274.7	497.0	464.6	32.34	15.369		
11,700.0	8,036.0	11,830.9	8,036.0	61.9	65.3	-90.00	3,211.0	-1,451.5	495.9	376.1	119.79	4.139		
11,800.0	8,036.0	11,930.8	8,036.0	63.5	66.9	-90.00	3,310.7	-1,446.0	490.4	367.2	123.19	3.981		
11,900.0	8,036.0	12,030.6	8,036.0	65.2	68.4	-90.00	3,410.4	-1,440.5	484.9	358.3	126.59	3.830		
12,000.0	8,036.0	12,130.5	8,036.0	66.8	70.0	-90.00	3,510.1	-1,435.0	479.4	349.4	130.00	3.688		
12,100.0	8,036.0	12,230.3	8,036.0	68.5	71.5	-90.00	3,609.8	-1,429.6	473.9	340.5	133.42	3.552		
12,200.0	8,036.0	12,330.2	8,036.0	70.1	73.1	-90.00	3,709.5	-1,424.1	468.4	331.6	136.84	3.423		
12,300.0	8,036.0	12,430.0	8,036.0	71.8	74.7	-90.00	3,809.2	-1,418.6	463.0	322.7	140.26	3.301		
12,400.0	8,036.0	12,528.5	8,036.0	73.5	76.2	-90.00	3,907.5	-1,413.2	457.5	313.8	143.67	3.184		
12,500.0	8,036.0	12,621.0	8,036.0	75.1	77.7	-90.00	3,999.9	-1,409.2	453.1	306.1	146.97	3.083		
12,600.0	8,036.0	12,713.7	8,036.0	76.8	79.2	-90.00	4,092.6	-1,406.6	450.4	300.1	150.28	2.997		
12,638.3	8,036.0	12,749.2	8,036.0	77.5	79.8	-90.00	4,128.1	-1,406.1	449.7	298.2	151.55	2.968		
12,664.3	8,036.0	12,773.3	8,036.0	77.9	80.2	-90.00	4,152.2	-1,405.8	449.6	297.5	152.05	2.957		
12,700.0	8,036.0	12,806.4	8,036.0	78.5	80.7	-90.00	4,185.3	-1,405.6	449.9	297.2	152.71	2.946		
12,800.0	8,036.0	12,904.8	8,036.0	80.2	82.3	-90.00	4,283.7	-1,405.5	453.8	299.2	154.54	2.936		
12,888.3	8,036.0	12,992.9	8,036.0	81.6	83.8	-90.00	4,371.8	-1,405.5	460.1	304.1	156.03	2.949		
12,900.0	8,036.0	13,004.5	8,036.0	81.8	84.0	-90.00	4,383.4	-1,405.5	461.1	304.7	156.44	2.948		
13,000.0	8,036.0	13,104.2	8,036.0	83.5	85.6	-90.00	4,483.0	-1,405.5	469.8	309.9	159.89	2.938		
13,100.0	8,036.0	13,203.8	8,036.0	85.1	87.3	-90.00	4,582.7	-1,405.5	478.5	315.1	163.35	2.929		

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 #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4A-29H-P168 (DROP) - 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 (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
13,200.0	8,036.0	13,303.4	8,036.0	86.8	88.9	-90.00	4,682.3	-1,405.5	487.1	320.3	166.80	2.920	
13,300.0	8,036.0	13,403.1	8,036.0	88.5	90.6	-90.00	4,781.9	-1,405.5	495.6	325.4	170.27	2.911 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 #2	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	33.46	-1.9	-11.3	10.7	9.0	1.70	6.301		
600.0	600.0	599.5	599.4	1.0	1.0	31.05	-4.4	-14.9	12.4	10.4	2.05	6.058		
700.0	699.9	699.3	699.0	1.2	1.2	29.96	-7.8	-19.9	14.2	11.8	2.41	5.923		
800.0	799.7	799.0	798.4	1.4	1.4	29.77	-12.2	-26.4	16.2	13.4	2.76	5.844		
900.0	899.4	898.7	897.6	1.6	1.7	30.19	-17.6	-34.3	18.1	15.0	3.13	5.798		
1,000.0	998.9	998.4	996.7	1.8	1.9	31.04	-23.9	-43.6	20.2	16.7	3.51	5.769		
1,100.0	1,098.3	1,098.0	1,095.5	2.1	2.2	32.18	-31.2	-54.3	22.4	18.5	3.90	5.747		
1,200.0	1,197.4	1,197.6	1,194.0	2.3	2.5	33.53	-39.4	-66.4	24.7	20.4	4.31	5.725		
1,245.6	1,242.5	1,243.0	1,238.8	2.5	2.6	34.19	-43.5	-72.4	25.8	21.2	4.51	5.713		
1,300.0	1,296.3	1,297.2	1,292.2	2.6	2.8	34.71	-48.7	-80.0	27.3	22.5	4.75	5.749		
1,400.0	1,395.3	1,396.9	1,390.2	2.9	3.1	34.44	-58.8	-94.9	31.2	26.0	5.17	6.027		
1,500.0	1,494.2	1,496.8	1,488.4	3.2	3.5	33.97	-69.1	-110.1	35.4	29.8	5.60	6.320		
1,600.0	1,593.1	1,596.7	1,586.6	3.5	3.8	33.59	-79.4	-125.3	39.6	33.5	6.02	6.570		
1,700.0	1,692.0	1,696.6	1,684.8	3.8	4.2	33.29	-89.8	-140.5	43.8	37.3	6.45	6.785		
1,800.0	1,790.9	1,796.5	1,783.0	4.1	4.5	33.04	-100.1	-155.7	48.0	41.1	6.88	6.973		
1,900.0	1,889.8	1,896.4	1,881.2	4.4	4.9	32.84	-110.4	-170.9	52.2	44.9	7.31	7.138		
2,000.0	1,988.7	1,996.3	1,979.4	4.7	5.2	32.66	-120.8	-186.1	56.4	48.6	7.74	7.284		
2,100.0	2,087.6	2,096.2	2,077.6	5.0	5.6	32.50	-131.1	-201.3	60.6	52.4	8.17	7.413		
2,200.0	2,186.6	2,196.1	2,175.8	5.3	6.0	32.37	-141.4	-216.5	64.8	56.2	8.60	7.530		
2,300.0	2,285.5	2,296.1	2,274.0	5.6	6.3	32.25	-151.8	-231.7	69.0	59.9	9.03	7.635		
2,400.0	2,384.4	2,396.0	2,372.2	5.9	6.7	32.15	-162.1	-246.9	73.2	63.7	9.47	7.730		
2,500.0	2,483.3	2,495.9	2,470.4	6.2	7.1	32.06	-172.5	-262.1	77.4	67.5	9.90	7.816		
2,600.0	2,582.2	2,595.8	2,568.7	6.5	7.4	31.98	-182.8	-277.3	81.6	71.2	10.33	7.895		
2,700.0	2,681.1	2,695.7	2,666.9	6.8	7.8	31.90	-193.1	-292.5	85.8	75.0	10.77	7.967		
2,800.0	2,780.0	2,795.6	2,765.1	7.1	8.1	31.83	-203.5	-307.7	90.0	78.8	11.20	8.033		
2,900.0	2,878.9	2,895.5	2,863.3	7.4	8.5	31.77	-213.8	-322.9	94.2	82.6	11.64	8.095		
3,000.0	2,977.9	2,995.4	2,961.5	7.8	8.9	31.72	-224.1	-338.2	98.4	86.3	12.07	8.152		
3,100.0	3,076.8	3,095.3	3,059.7	8.1	9.2	31.66	-234.5	-353.4	102.6	90.1	12.51	8.205		
3,200.0	3,175.7	3,195.3	3,157.9	8.4	9.6	31.62	-244.8	-368.6	106.8	93.9	12.94	8.254		
3,300.0	3,274.6	3,295.2	3,256.1	8.7	10.0	31.57	-255.1	-383.8	111.0	97.6	13.38	8.300		
3,400.0	3,373.5	3,395.1	3,354.3	9.0	10.3	31.53	-265.5	-399.0	115.2	101.4	13.81	8.342		
3,500.0	3,472.4	3,495.0	3,452.5	9.3	10.7	31.49	-275.8	-414.2	119.4	105.2	14.25	8.383		
3,600.0	3,571.3	3,594.9	3,550.7	9.6	11.1	31.46	-286.1	-429.4	123.6	108.9	14.68	8.420		
3,700.0	3,670.3	3,694.8	3,648.9	9.9	11.4	31.43	-296.5	-444.6	127.8	112.7	15.12	8.456		
3,800.0	3,769.2	3,794.7	3,747.1	10.2	11.8	31.39	-306.8	-459.8	132.0	116.5	15.55	8.489		
3,900.0	3,868.1	3,894.6	3,845.3	10.5	12.2	31.37	-317.1	-475.0	136.2	120.2	15.99	8.521		
4,000.0	3,967.0	3,994.6	3,943.5	10.9	12.5	31.34	-327.5	-490.2	140.4	124.0	16.42	8.551		
4,100.0	4,065.9	4,094.5	4,041.7	11.2	12.9	31.31	-337.8	-505.4	144.6	127.8	16.86	8.579		
4,200.0	4,164.8	4,194.4	4,139.9	11.5	13.3	31.29	-348.2	-520.6	148.8	131.6	17.30	8.606		
4,300.0	4,263.7	4,294.3	4,238.1	11.8	13.6	31.26	-358.5	-535.8	153.1	135.3	17.73	8.632		
4,400.0	4,362.6	4,394.2	4,336.3	12.1	14.0	31.24	-368.8	-551.0	157.3	139.1	18.17	8.656		
4,500.0	4,461.6	4,494.1	4,434.6	12.4	14.4	31.22	-379.2	-566.2	161.5	142.9	18.60	8.679		
4,600.0	4,560.5	4,594.0	4,532.8	12.7	14.7	31.20	-389.5	-581.4	165.7	146.6	19.04	8.701		
4,700.0	4,659.4	4,693.9	4,631.0	13.0	15.1	31.18	-399.8	-596.6	169.9	150.4	19.48	8.722		
4,800.0	4,758.3	4,793.8	4,729.2	13.3	15.5	31.17	-410.2	-611.8	174.1	154.2	19.91	8.742		
4,900.0	4,857.2	4,893.8	4,827.4	13.6	15.8	31.15	-420.5	-627.1	178.3	157.9	20.35	8.761		
5,000.0	4,956.1	4,993.7	4,925.6	14.0	16.2	31.13	-430.8	-642.3	182.5	161.7	20.78	8.780		

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 #2	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						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	5,055.0	5,093.6	5,023.8	14.3	16.6	31.12	-441.2	-657.5	186.7	165.5	21.22	8.797		
5,200.0	5,153.9	5,193.5	5,122.0	14.6	16.9	31.10	-451.5	-672.7	190.9	169.2	21.66	8.814		
5,300.0	5,252.9	5,293.4	5,220.2	14.9	17.3	31.09	-461.8	-687.9	195.1	173.0	22.09	8.831		
5,400.0	5,351.8	5,393.3	5,318.4	15.2	17.7	31.08	-472.2	-703.1	199.3	176.8	22.53	8.846		
5,500.0	5,450.7	5,493.2	5,416.6	15.5	18.0	31.06	-482.5	-718.3	203.5	180.5	22.97	8.861		
5,600.0	5,549.6	5,593.1	5,514.8	15.8	18.4	31.05	-492.8	-733.5	207.7	184.3	23.40	8.875		
5,700.0	5,648.5	5,693.0	5,613.0	16.1	18.8	31.04	-503.2	-748.7	211.9	188.1	23.84	8.889		
5,800.0	5,747.4	5,793.0	5,711.2	16.4	19.1	31.03	-513.5	-763.9	216.1	191.8	24.28	8.903		
5,900.0	5,846.3	5,892.9	5,809.4	16.8	19.5	31.02	-523.8	-779.1	220.3	195.6	24.71	8.916		
6,000.0	5,945.2	5,992.8	5,907.6	17.1	19.9	31.01	-534.2	-794.3	224.5	199.4	25.15	8.928		
6,100.0	6,044.2	6,092.7	6,005.8	17.4	20.2	31.00	-544.5	-809.5	228.7	203.2	25.59	8.940		
6,200.0	6,143.1	6,192.6	6,104.0	17.7	20.6	30.99	-554.9	-824.7	232.9	206.9	26.02	8.952		
6,300.0	6,242.0	6,292.5	6,202.3	18.0	21.0	30.98	-565.2	-839.9	237.1	210.7	26.46	8.963		
6,400.0	6,340.9	6,392.4	6,300.5	18.3	21.4	30.97	-575.5	-855.1	241.4	214.5	26.90	8.974		
6,500.0	6,439.8	6,492.3	6,398.7	18.6	21.7	30.96	-585.9	-870.3	245.6	218.2	27.33	8.984		
6,600.0	6,538.7	6,592.3	6,496.9	18.9	22.1	30.95	-596.2	-885.5	249.8	222.0	27.77	8.994		
6,700.0	6,637.6	6,692.2	6,595.1	19.2	22.5	30.94	-606.5	-900.7	254.0	225.8	28.21	9.004		
6,800.0	6,736.6	6,792.1	6,693.3	19.6	22.8	30.93	-616.9	-915.9	258.2	229.5	28.64	9.014		
6,900.0	6,835.5	6,892.0	6,791.5	19.9	23.2	30.93	-627.2	-931.2	262.4	233.3	29.08	9.023		
7,000.0	6,934.4	6,991.9	6,889.7	20.2	23.6	30.92	-637.5	-946.4	266.6	237.1	29.52	9.032		
7,100.0	7,033.3	7,093.3	6,989.4	20.5	23.9	30.98	-647.7	-961.8	270.7	240.8	29.97	9.034		
7,200.0	7,132.2	7,199.7	7,094.3	20.8	24.2	33.76	-645.2	-978.0	273.2	242.0	31.16	8.767		
7,300.0	7,231.1	7,298.3	7,189.7	21.1	24.2	39.85	-625.5	-992.8	275.4	242.1	33.32	8.267		
7,400.0	7,330.0	7,384.9	7,269.6	21.4	24.2	47.72	-594.7	-1,005.2	282.7	246.7	35.98	7.859		
7,486.5	7,415.6	7,450.0	7,326.1	21.7	24.1	54.80	-563.7	-1,013.9	297.2	259.0	38.23	7.775		
7,500.0	7,429.0	7,458.5	7,333.2	21.7	24.1	48.13	-559.2	-1,015.0	300.3	261.7	38.61	7.778		
7,550.0	7,478.6	7,492.3	7,360.8	21.8	24.1	13.41	-540.2	-1,019.3	312.9	273.0	39.89	7.843		
7,600.0	7,528.1	7,525.4	7,386.8	21.9	24.0	-14.73	-520.0	-1,023.3	326.9	286.1	40.80	8.012		
7,650.0	7,577.2	7,557.9	7,411.1	21.9	24.0	-26.94	-498.8	-1,027.1	341.7	300.4	41.29	8.276		
7,700.0	7,625.4	7,589.9	7,433.8	21.9	23.9	-31.58	-476.5	-1,030.6	357.0	315.6	41.36	8.632		
7,750.0	7,672.5	7,621.5	7,455.0	21.9	23.8	-33.09	-453.3	-1,033.9	372.4	331.3	41.02	9.078		
7,800.0	7,717.9	7,650.0	7,473.0	21.9	23.8	-33.36	-431.4	-1,036.7	387.5	347.2	40.30	9.614		
7,850.0	7,761.5	7,683.6	7,492.8	21.8	23.7	-32.71	-404.4	-1,039.7	402.1	362.9	39.24	10.247		
7,900.0	7,802.8	7,714.2	7,509.5	21.7	23.6	-31.92	-378.9	-1,042.3	416.0	378.1	37.88	10.982		
7,950.0	7,841.6	7,750.0	7,527.2	21.6	23.5	-30.84	-347.9	-1,045.1	429.1	392.9	36.25	11.837		
8,000.0	7,877.5	7,774.7	7,538.4	21.5	23.5	-30.13	-325.9	-1,046.8	441.1	406.6	34.47	12.797		
8,050.0	7,910.3	7,800.0	7,548.7	21.3	23.5	-29.40	-302.9	-1,048.4	452.0	419.5	32.55	13.888		
8,100.0	7,939.7	7,834.5	7,561.3	21.2	23.4	-28.49	-270.8	-1,050.3	461.6	431.1	30.49	15.137		
8,150.0	7,965.5	7,864.2	7,570.6	21.1	23.3	-27.80	-242.7	-1,051.8	469.9	441.4	28.47	16.507		
8,200.0	7,987.5	7,900.0	7,579.8	21.0	23.3	-27.09	-208.1	-1,053.2	476.9	450.4	26.49	18.001		
8,250.0	8,005.6	7,923.3	7,584.6	21.0	23.3	-26.68	-185.4	-1,054.0	482.3	457.5	24.75	19.485		
8,300.0	8,019.5	7,950.0	7,589.0	20.9	23.3	-26.30	-159.0	-1,054.6	486.2	463.0	23.28	20.884		
8,350.0	8,029.3	7,982.1	7,592.7	20.9	23.3	-25.95	-127.2	-1,055.2	488.7	466.5	22.21	22.005		
8,400.0	8,034.7	8,011.4	7,594.6	20.9	23.2	-25.73	-97.9	-1,055.5	489.6	467.9	21.65	22.616		
8,438.3	8,036.0	8,034.3	7,595.0	20.9	23.3	-25.62	-75.1	-1,055.6	489.2	467.6	21.60	22.647		
8,500.0	8,036.0	8,095.9	7,595.0	21.0	23.3	-25.27	-13.4	-1,055.6	487.8	466.0	21.85	22.328		
8,600.0	8,036.0	8,195.8	7,595.0	21.3	23.5	-24.72	86.4	-1,055.6	485.6	463.3	22.32	21.757		
8,700.0	8,036.0	8,295.6	7,595.0	21.7	23.8	-24.15	186.3	-1,055.6	483.4	460.6	22.87	21.138		
8,800.0	8,036.0	8,395.5	7,595.0	22.3	24.2	-23.59	286.2	-1,055.6	481.3	457.8	23.48	20.498		
8,900.0	8,036.0	8,495.4	7,595.0	22.9	24.7	-23.01	386.0	-1,055.6	479.2	455.1	24.14	19.855		
8,938.3	8,036.0	8,533.6	7,595.0	23.2	25.0	-22.79	424.3	-1,055.6	478.4	454.0	24.40	19.609		
9,000.0	8,036.0	8,595.2	7,595.0	23.7	25.4	-22.43	485.9	-1,055.6	477.2	452.4	24.83	19.222		

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 #2	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 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)				
9,100.0	8,036.0	8,695.1	7,595.0	24.6	26.1	-21.85	585.8	-1,055.6	475.2	449.7	25.53	18.612		
9,200.0	8,036.0	8,794.9	7,595.0	25.5	27.0	-21.26	685.6	-1,055.6	473.3	447.1	26.25	18.030		
9,300.0	8,036.0	8,894.8	7,595.0	26.6	27.9	-20.67	785.5	-1,055.6	471.4	444.5	26.97	17.481		
9,400.0	8,036.0	8,994.7	7,595.0	27.7	28.9	-20.08	885.3	-1,055.6	469.6	441.9	27.68	16.967		
9,500.0	8,036.0	9,094.5	7,595.0	28.9	30.0	-19.47	985.2	-1,055.6	467.8	439.5	28.37	16.488		
9,600.0	8,036.0	9,194.4	7,595.0	30.1	31.1	-18.87	1,085.1	-1,055.6	466.1	437.1	29.05	16.046		
9,700.0	8,036.0	9,294.3	7,595.0	31.4	32.3	-18.26	1,184.9	-1,055.6	464.4	434.7	29.70	15.638		
9,800.0	8,036.0	9,394.1	7,595.0	32.8	33.6	-17.64	1,284.8	-1,055.6	462.8	432.5	30.32	15.264		
9,900.0	8,036.0	9,494.0	7,595.0	34.1	34.8	-17.03	1,384.7	-1,055.6	461.3	430.4	30.91	14.922		
10,000.0	8,036.0	9,593.8	7,595.0	35.5	36.2	-16.40	1,484.5	-1,055.6	459.8	428.3	31.47	14.610		
10,100.0	8,036.0	9,693.7	7,595.0	37.0	37.5	-15.78	1,584.4	-1,055.6	458.3	426.3	31.99	14.327		
10,200.0	8,036.0	9,793.6	7,595.0	38.4	38.9	-15.14	1,684.3	-1,055.6	456.9	424.4	32.47	14.071		
10,300.0	8,036.0	9,893.4	7,595.0	39.9	40.4	-14.51	1,784.1	-1,055.6	455.6	422.7	32.92	13.840		
10,400.0	8,036.0	9,993.3	7,595.0	41.4	41.8	-13.87	1,884.0	-1,055.6	454.3	421.0	33.32	13.633		
10,438.3	8,036.0	10,031.5	7,595.0	42.0	42.4	-13.63	1,922.2	-1,055.6	453.8	420.3	33.47	13.560		
10,500.0	8,036.0	10,093.2	7,595.0	42.9	43.3	-13.28	1,983.9	-1,055.6	453.1	419.4	33.69	13.450		
10,600.0	8,036.0	10,193.1	7,595.0	44.5	44.8	-12.88	2,083.8	-1,055.6	452.4	418.2	34.15	13.248		
10,700.0	8,036.0	10,293.1	7,595.0	46.0	46.3	-12.69	2,183.8	-1,055.6	452.0	417.3	34.74	13.013		
10,738.3	8,036.0	10,331.4	7,595.0	46.6	46.9	-12.68	2,222.1	-1,055.6	452.0	417.0	35.00	12.915		
10,800.0	8,036.0	10,393.1	7,595.0	47.5	47.8	-12.68	2,283.8	-1,055.6	452.0	416.5	35.48	12.742		
10,900.0	8,036.0	10,493.1	7,595.0	49.1	49.3	-12.68	2,383.8	-1,055.6	452.0	415.8	36.25	12.470		
11,000.0	8,036.0	10,593.1	7,595.0	50.6	50.9	-12.68	2,483.8	-1,055.6	452.0	415.0	37.03	12.208		
11,100.0	8,036.0	10,693.1	7,595.0	52.2	52.5	-12.68	2,583.8	-1,055.6	452.0	414.2	37.81	11.956		
11,200.0	8,036.0	10,793.1	7,595.0	53.8	54.0	-12.68	2,683.8	-1,055.6	452.0	413.4	38.59	11.713		
11,300.0	8,036.0	10,893.1	7,595.0	55.4	55.6	-12.68	2,783.8	-1,055.6	452.0	412.6	39.38	11.479		
11,400.0	8,036.0	10,993.1	7,595.0	57.0	57.2	-12.68	2,883.8	-1,055.6	452.0	411.9	40.17	11.253		
11,500.0	8,036.0	11,093.1	7,595.0	58.6	58.8	-12.68	2,983.8	-1,055.6	452.0	411.1	40.96	11.036		
11,600.0	8,036.0	11,193.1	7,595.0	60.3	60.5	-12.68	3,083.8	-1,055.6	452.0	410.3	41.76	10.825		
11,700.0	8,036.0	11,293.1	7,595.0	61.9	62.1	-12.68	3,183.8	-1,055.6	452.0	409.5	42.55	10.622		
11,800.0	8,036.0	11,393.1	7,595.0	63.5	63.7	-12.68	3,283.8	-1,055.6	452.0	408.7	43.35	10.426		
11,900.0	8,036.0	11,493.1	7,595.0	65.2	65.4	-12.68	3,383.8	-1,055.6	452.0	407.9	44.16	10.237		
12,000.0	8,036.0	11,593.1	7,595.0	66.8	67.0	-12.68	3,483.8	-1,055.6	452.0	407.1	44.96	10.054		
12,100.0	8,036.0	11,693.1	7,595.0	68.5	68.6	-12.68	3,583.8	-1,055.6	452.0	406.3	45.77	9.877		
12,200.0	8,036.0	11,793.1	7,595.0	70.1	70.3	-12.68	3,683.8	-1,055.6	452.0	405.4	46.57	9.705		
12,300.0	8,036.0	11,893.1	7,595.0	71.8	72.0	-12.68	3,783.8	-1,055.6	452.0	404.6	47.38	9.539		
12,400.0	8,036.0	11,993.1	7,595.0	73.5	73.6	-12.68	3,883.8	-1,055.6	452.0	403.8	48.20	9.379		
12,500.0	8,036.0	12,093.1	7,595.0	75.1	75.3	-12.68	3,983.8	-1,055.6	452.0	403.0	49.01	9.223		
12,600.0	8,036.0	12,193.1	7,595.0	76.8	77.0	-12.68	4,083.8	-1,055.6	452.0	402.2	49.83	9.072		
12,638.3	8,036.0	12,231.4	7,595.0	77.5	77.6	-12.68	4,122.1	-1,055.6	452.0	401.9	50.14	9.016		
12,638.3	8,036.0	12,231.4	7,595.0	77.5	77.6	-12.68	4,122.1	-1,055.6	452.0	401.9	50.14	9.016		
12,700.0	8,036.0	12,293.1	7,595.0	78.5	78.6	-12.76	4,183.8	-1,055.6	452.2	401.5	50.68	8.921		
12,800.0	8,036.0	12,393.0	7,595.0	80.2	80.3	-13.22	4,283.7	-1,055.6	453.0	400.9	52.12	8.692		
12,888.3	8,036.0	12,481.1	7,595.0	81.6	81.8	-13.97	4,371.8	-1,055.6	454.5	400.6	53.98	8.420		
12,900.0	8,036.0	12,492.8	7,595.0	81.8	82.0	-14.09	4,383.4	-1,055.6	454.8	400.5	54.31	8.374		
13,000.0	8,036.0	12,592.4	7,595.0	83.5	83.7	-15.15	4,483.0	-1,055.6	457.0	399.8	57.14	7.997		
13,100.0	8,036.0	12,692.0	7,595.0	85.1	85.4	-16.18	4,582.7	-1,055.6	459.3	399.2	60.12	7.641		
13,200.0	8,036.0	12,791.6	7,595.0	86.8	87.0	-17.21	4,682.3	-1,055.6	461.8	398.6	63.21	7.306		
13,300.0	8,036.0	12,891.3	7,595.0	88.5	88.7	-18.21	4,781.9	-1,055.6	464.4	398.0	66.42	6.992		
13,400.0	8,036.0	12,990.9	7,595.0	90.1	90.4	-19.21	4,881.6	-1,055.6	467.2	397.4	69.74	6.699		
13,500.0	8,036.0	13,090.5	7,595.0	91.8	92.1	-20.18	4,981.2	-1,055.6	470.0	396.9	73.15	6.426		
13,600.0	8,036.0	13,190.2	7,595.0	93.5	93.8	-21.14	5,080.8	-1,055.6	473.0	396.4	76.64	6.172		
13,700.0	8,036.0	13,289.8	7,595.0	95.2	95.5	-22.08	5,180.5	-1,055.6	476.1	395.9	80.22	5.935		

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 #2	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 (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
13,800.0	8,036.0	13,389.5	7,595.0	96.9	97.2	-23.01	5,280.1	-1,055.6	479.4	395.5	83.87	5.716	
13,900.0	8,036.0	13,489.1	7,595.0	98.6	98.9	-23.92	5,379.8	-1,055.6	482.7	395.1	87.58	5.511	
14,000.0	8,036.0	13,588.8	7,595.0	100.2	100.6	-24.81	5,479.5	-1,055.6	486.1	394.8	91.36	5.321	
14,100.0	8,036.0	13,688.4	7,595.0	101.9	102.3	-25.68	5,579.1	-1,055.6	489.7	394.5	95.18	5.144	
14,200.0	8,036.0	13,788.1	7,595.0	103.6	104.0	-26.54	5,678.8	-1,055.6	493.3	394.2	99.06	4.980	
14,300.0	8,036.0	13,887.8	7,595.0	105.3	105.7	-27.38	5,778.4	-1,055.6	497.0	394.0	102.97	4.827 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 #2	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	-141.85	0.0	11.2	11.9	10.2	1.70	6.986			
600.0	600.0	600.1	600.1	1.0	1.0	-145.58	-0.8	10.8	13.5	11.4	2.05	6.576			
700.0	699.9	700.2	700.2	1.2	1.2	-146.85	-3.1	9.4	15.5	13.1	2.40	6.449 SF			
800.0	799.7	800.4	800.3	1.4	1.4	-146.41	-6.9	7.2	17.9	15.1	2.76	6.475			
900.0	899.4	900.6	900.2	1.6	1.6	-144.87	-12.2	4.1	20.7	17.5	3.14	6.593			
1,000.0	998.9	1,000.6	1,000.0	1.8	1.8	-143.46	-18.7	0.3	24.1	20.6	3.52	6.840			
1,100.0	1,098.3	1,100.5	1,099.5	2.1	2.0	-144.35	-25.3	-3.6	28.8	24.9	3.91	7.380			
1,200.0	1,197.4	1,200.3	1,199.1	2.3	2.2	-146.61	-31.9	-7.5	35.1	30.8	4.29	8.165			
1,245.6	1,242.5	1,245.7	1,244.4	2.5	2.3	-147.85	-34.9	-9.2	38.4	33.9	4.47	8.594			
1,300.0	1,296.3	1,300.0	1,298.5	2.6	2.4	-149.25	-38.5	-11.3	42.6	37.9	4.67	9.109			
1,400.0	1,395.3	1,399.6	1,397.9	2.9	2.6	-151.20	-45.1	-15.2	50.3	45.3	5.05	9.954			
1,500.0	1,494.2	1,499.3	1,497.3	3.2	2.8	-152.64	-51.6	-19.0	58.1	52.7	5.44	10.688			
1,600.0	1,593.1	1,599.0	1,596.6	3.5	3.0	-153.73	-58.2	-22.9	65.9	60.1	5.82	11.330			
1,700.0	1,692.0	1,698.7	1,696.0	3.8	3.2	-154.60	-64.8	-26.7	73.7	67.5	6.20	11.895			
1,800.0	1,790.9	1,798.4	1,795.4	4.1	3.5	-155.29	-71.4	-30.6	81.6	75.0	6.58	12.397			
1,900.0	1,889.8	1,898.1	1,894.8	4.4	3.7	-155.87	-77.9	-34.4	89.4	82.5	6.96	12.844			
2,000.0	1,988.7	1,997.8	1,994.2	4.7	3.9	-156.35	-84.5	-38.2	97.3	89.9	7.35	13.246			
2,100.0	2,087.6	2,097.5	2,093.6	5.0	4.1	-156.76	-91.1	-42.1	105.2	97.4	7.73	13.608			
2,200.0	2,186.6	2,197.1	2,193.0	5.3	4.3	-157.11	-97.7	-45.9	113.0	104.9	8.11	13.937			
2,300.0	2,285.5	2,296.8	2,292.4	5.6	4.5	-157.42	-104.2	-49.8	120.9	112.4	8.49	14.236			
2,400.0	2,384.4	2,396.5	2,391.8	5.9	4.8	-157.69	-110.8	-53.6	128.8	119.9	8.88	14.510			
2,500.0	2,483.3	2,496.2	2,491.2	6.2	5.0	-157.93	-117.4	-57.5	136.7	127.4	9.26	14.761			
2,600.0	2,582.2	2,595.9	2,590.6	6.5	5.2	-158.14	-124.0	-61.3	144.5	134.9	9.64	14.992			
2,700.0	2,681.1	2,695.6	2,690.0	6.8	5.4	-158.33	-130.6	-65.2	152.4	142.4	10.02	15.206			
2,800.0	2,780.0	2,795.3	2,789.4	7.1	5.6	-158.50	-137.1	-69.0	160.3	149.9	10.41	15.404			
2,900.0	2,878.9	2,895.0	2,888.8	7.4	5.8	-158.66	-143.7	-72.9	168.2	157.4	10.79	15.588			
3,000.0	2,977.9	2,994.6	2,988.2	7.8	6.1	-158.80	-150.3	-76.7	176.1	164.9	11.17	15.760			
3,100.0	3,076.8	3,094.3	3,087.6	8.1	6.3	-158.93	-156.9	-80.6	184.0	172.4	11.56	15.920			
3,200.0	3,175.7	3,194.0	3,187.0	8.4	6.5	-159.05	-163.4	-84.4	191.9	179.9	11.94	16.070			
3,300.0	3,274.6	3,293.7	3,286.4	8.7	6.7	-159.16	-170.0	-88.3	199.7	187.4	12.32	16.210			
3,400.0	3,373.5	3,393.4	3,385.8	9.0	6.9	-159.26	-176.6	-92.1	207.6	194.9	12.71	16.342			
3,500.0	3,472.4	3,493.1	3,485.2	9.3	7.1	-159.35	-183.2	-96.0	215.5	202.4	13.09	16.467			
3,600.0	3,571.3	3,592.8	3,584.6	9.6	7.4	-159.44	-189.8	-99.8	223.4	210.0	13.47	16.584			
3,700.0	3,670.3	3,692.5	3,684.0	9.9	7.6	-159.52	-196.3	-103.7	231.3	217.5	13.86	16.695			
3,800.0	3,769.2	3,792.1	3,783.4	10.2	7.8	-159.60	-202.9	-107.5	239.2	225.0	14.24	16.800			
3,900.0	3,868.1	3,891.8	3,882.8	10.5	8.0	-159.67	-209.5	-111.4	247.1	232.5	14.62	16.899			
4,000.0	3,967.0	3,991.5	3,982.1	10.9	8.2	-159.73	-216.1	-115.2	255.0	240.0	15.01	16.993			
4,100.0	4,065.9	4,091.2	4,081.5	11.2	8.5	-159.80	-222.6	-119.1	262.9	247.5	15.39	17.083			
4,200.0	4,164.8	4,190.9	4,180.9	11.5	8.7	-159.86	-229.2	-122.9	270.8	255.0	15.77	17.168			
4,300.0	4,263.7	4,290.6	4,280.3	11.8	8.9	-159.91	-235.8	-126.8	278.7	262.5	16.16	17.249			
4,400.0	4,362.6	4,390.3	4,379.7	12.1	9.1	-159.96	-242.4	-130.6	286.6	270.0	16.54	17.327			
4,500.0	4,461.6	4,490.0	4,479.1	12.4	9.3	-160.01	-249.0	-134.5	294.5	277.5	16.92	17.401			
4,600.0	4,560.5	4,589.6	4,578.5	12.7	9.5	-160.06	-255.5	-138.3	302.4	285.1	17.31	17.471			
4,700.0	4,659.4	4,689.3	4,677.9	13.0	9.8	-160.11	-262.1	-142.2	310.3	292.6	17.69	17.539			
4,800.0	4,758.3	4,789.0	4,777.3	13.3	10.0	-160.15	-268.7	-146.0	318.2	300.1	18.07	17.604			
4,900.0	4,857.2	4,888.7	4,876.7	13.6	10.2	-160.19	-275.3	-149.9	326.0	307.6	18.46	17.666			
5,000.0	4,956.1	4,988.4	4,976.1	14.0	10.4	-160.23	-281.8	-153.7	333.9	315.1	18.84	17.725			

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 #2	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							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	5,055.0	5,088.1	5,075.5	14.3	10.6	-160.26	-288.4	-157.6	341.8	322.6	19.22	17.782		
5,200.0	5,153.9	5,187.8	5,174.9	14.6	10.9	-160.30	-295.0	-161.4	349.7	330.1	19.61	17.837		
5,300.0	5,252.9	5,287.5	5,274.3	14.9	11.1	-160.33	-301.6	-165.3	357.6	337.6	19.99	17.890		
5,400.0	5,351.8	5,387.1	5,373.7	15.2	11.3	-160.36	-308.1	-169.1	365.5	345.2	20.37	17.941		
5,500.0	5,450.7	5,486.8	5,473.1	15.5	11.5	-160.39	-314.7	-173.0	373.4	352.7	20.76	17.990		
5,600.0	5,549.6	5,586.5	5,572.5	15.8	11.7	-160.42	-321.3	-176.8	381.3	360.2	21.14	18.037		
5,700.0	5,648.5	5,686.2	5,671.9	16.1	12.0	-160.45	-327.9	-180.7	389.2	367.7	21.52	18.082		
5,800.0	5,747.4	5,785.9	5,771.3	16.4	12.2	-160.48	-334.5	-184.5	397.1	375.2	21.91	18.126		
5,900.0	5,846.3	5,885.6	5,870.7	16.8	12.4	-160.51	-341.0	-188.4	405.0	382.7	22.29	18.168		
6,000.0	5,945.2	5,985.3	5,970.1	17.1	12.6	-160.53	-347.6	-192.2	412.9	390.2	22.68	18.209		
6,100.0	6,044.2	6,085.0	6,069.5	17.4	12.8	-160.55	-354.2	-196.0	420.8	397.7	23.06	18.249		
6,200.0	6,143.1	6,184.6	6,168.9	17.7	13.0	-160.58	-360.8	-199.9	428.7	405.3	23.44	18.287		
6,300.0	6,242.0	6,284.3	6,268.3	18.0	13.3	-160.60	-367.3	-203.7	436.6	412.8	23.83	18.324		
6,400.0	6,340.9	6,384.0	6,367.6	18.3	13.5	-160.62	-373.9	-207.6	444.5	420.3	24.21	18.360		
6,500.0	6,439.8	6,483.7	6,467.0	18.6	13.7	-160.64	-380.5	-211.4	452.4	427.8	24.59	18.395		
6,600.0	6,538.7	6,583.4	6,566.4	18.9	13.9	-160.66	-387.1	-215.3	460.3	435.3	24.98	18.428		
6,700.0	6,637.6	6,683.1	6,665.8	19.2	14.1	-160.68	-393.7	-219.1	468.2	442.8	25.36	18.461		
6,800.0	6,736.6	6,782.8	6,765.2	19.6	14.4	-160.70	-400.2	-223.0	476.1	450.3	25.74	18.493		
6,900.0	6,835.5	6,882.5	6,864.6	19.9	14.6	-160.72	-406.8	-226.8	484.0	457.9	26.13	18.524		
7,000.0	6,934.4	6,982.1	6,964.0	20.2	14.8	-160.74	-413.4	-230.7	491.9	465.4	26.51	18.553		

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 #2	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		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			
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	-140.71	0.0	19.6	20.3	18.6	1.70	11.925		
600.0	600.0	600.0	600.0	1.0	1.0	-144.95	0.0	19.6	22.4	20.3	2.05	10.909		
700.0	699.9	699.9	699.9	1.2	1.2	-150.44	0.0	19.6	26.1	23.7	2.40	10.856 SF		
800.0	799.7	799.7	799.7	1.4	1.4	-155.90	0.0	19.6	31.5	28.8	2.75	11.461		
900.0	899.4	899.4	899.4	1.6	1.5	-160.61	0.0	19.6	38.8	35.7	3.10	12.529		
1,000.0	998.9	998.9	998.9	1.8	1.7	-164.39	0.0	19.6	48.0	44.5	3.44	13.927		
1,100.0	1,098.3	1,098.3	1,098.3	2.1	1.9	-167.33	0.0	19.6	58.9	55.2	3.79	15.562		
1,200.0	1,197.4	1,197.4	1,197.4	2.3	2.1	-169.59	0.0	19.6	71.7	67.6	4.13	17.370		
1,245.6	1,242.5	1,242.5	1,242.5	2.5	2.1	-170.44	0.0	19.6	78.2	73.9	4.29	18.240		
1,300.0	1,296.3	1,296.3	1,296.3	2.6	2.2	-171.33	0.0	19.6	86.1	81.6	4.47	19.238		
1,400.0	1,395.3	1,395.3	1,395.3	2.9	2.4	-172.59	0.0	19.6	100.6	95.8	4.82	20.878		
1,500.0	1,494.2	1,494.2	1,494.2	3.2	2.6	-173.53	0.0	19.6	115.2	110.1	5.17	22.305		
1,600.0	1,593.1	1,593.1	1,593.1	3.5	2.8	-174.26	0.0	19.6	129.9	124.3	5.51	23.557		
1,700.0	1,692.0	1,692.0	1,692.0	3.8	2.9	-174.85	0.0	19.6	144.5	138.6	5.86	24.664		
1,800.0	1,790.9	1,790.9	1,790.9	4.1	3.1	-175.32	0.0	19.6	159.1	152.9	6.20	25.649		
1,900.0	1,889.8	1,889.8	1,889.8	4.4	3.3	-175.72	0.0	19.6	173.8	167.3	6.55	26.532		
2,000.0	1,988.7	1,988.7	1,988.7	4.7	3.4	-176.05	0.0	19.6	188.5	181.6	6.90	27.326		
2,100.0	2,087.6	2,088.6	2,088.6	5.0	3.6	-176.15	-0.7	19.8	202.9	195.7	7.25	28.007		
2,200.0	2,186.6	2,188.8	2,188.8	5.3	3.8	-175.80	-3.0	20.6	216.9	209.3	7.60	28.543		
2,300.0	2,285.5	2,289.0	2,288.9	5.6	4.0	-175.08	-6.9	22.0	230.3	222.3	7.95	28.950		
2,400.0	2,384.4	2,389.3	2,389.0	5.9	4.2	-174.03	-12.5	23.9	243.2	234.9	8.32	29.243		
2,500.0	2,483.3	2,489.5	2,488.9	6.2	4.3	-172.71	-19.8	26.3	255.8	247.1	8.69	29.430		
2,600.0	2,582.2	2,589.6	2,588.6	6.5	4.5	-171.15	-28.7	29.4	268.1	259.0	9.08	29.522		
2,700.0	2,681.1	2,689.5	2,687.9	6.8	4.7	-169.38	-39.2	33.0	280.2	270.7	9.49	29.526		
2,800.0	2,780.0	2,789.0	2,786.5	7.1	5.0	-167.45	-51.3	37.1	292.3	282.4	9.92	29.463		
2,900.0	2,878.9	2,887.8	2,884.4	7.4	5.2	-165.62	-63.6	41.2	304.6	294.3	10.37	29.388		
3,000.0	2,977.9	2,986.5	2,982.3	7.8	5.4	-163.93	-75.9	45.4	317.2	306.4	10.82	29.314		
3,100.0	3,076.8	3,085.3	3,080.3	8.1	5.6	-162.37	-88.2	49.6	330.1	318.8	11.29	29.240		
3,200.0	3,175.7	3,184.1	3,178.2	8.4	5.9	-160.92	-100.5	53.8	343.2	331.4	11.77	29.169		
3,300.0	3,274.6	3,282.9	3,276.1	8.7	6.1	-159.58	-112.8	58.0	356.5	344.2	12.25	29.101		
3,400.0	3,373.5	3,381.7	3,374.0	9.0	6.4	-158.34	-125.1	62.2	369.9	357.2	12.74	29.037		
3,500.0	3,472.4	3,480.4	3,472.0	9.3	6.6	-157.18	-137.4	66.4	383.5	370.3	13.24	28.978		
3,600.0	3,571.3	3,579.2	3,569.9	9.6	6.9	-156.11	-149.7	70.6	397.3	383.6	13.74	28.922		
3,700.0	3,670.3	3,678.0	3,667.8	9.9	7.1	-155.10	-162.0	74.7	411.2	397.0	14.24	28.872		
3,800.0	3,769.2	3,776.8	3,765.7	10.2	7.4	-154.16	-174.3	78.9	425.2	410.5	14.75	28.826		
3,900.0	3,868.1	3,875.6	3,863.6	10.5	7.6	-153.29	-186.6	83.1	439.3	424.1	15.26	28.784		
4,000.0	3,967.0	3,974.3	3,961.6	10.9	7.9	-152.46	-198.9	87.3	453.6	437.8	15.78	28.746		
4,100.0	4,065.9	4,073.1	4,059.5	11.2	8.1	-151.69	-211.2	91.5	467.9	451.6	16.29	28.712		
4,200.0	4,164.8	4,171.9	4,157.4	11.5	8.4	-150.96	-223.5	95.7	482.2	465.4	16.81	28.682		
4,300.0	4,263.7	4,270.7	4,255.3	11.8	8.7	-150.27	-235.8	99.9	496.7	479.4	17.33	28.655		

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 #2	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 (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	CC, ES	
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		
500.0	500.0	500.0	500.0	0.9	0.8	-140.13	0.0	30.8	31.5	29.8	1.70	18.513		
600.0	600.0	599.7	599.7	1.0	1.0	-141.70	-0.8	31.3	34.0	31.9	2.05	16.563	SF	
700.0	699.9	699.2	699.2	1.2	1.2	-142.32	-2.9	32.7	38.7	36.3	2.40	16.094		
800.0	799.7	798.6	798.5	1.4	1.4	-142.21	-6.6	35.0	45.6	42.9	2.76	16.512		
900.0	899.4	897.8	897.5	1.6	1.6	-141.66	-11.7	38.2	54.8	51.7	3.14	17.484		
1,000.0	998.9	996.6	996.0	1.8	1.8	-140.89	-18.2	42.4	66.2	62.7	3.52	18.803		
1,100.0	1,098.3	1,095.0	1,094.0	2.1	2.0	-140.05	-26.0	47.4	79.9	75.9	3.93	20.334		
1,200.0	1,197.4	1,193.0	1,191.3	2.3	2.2	-139.24	-35.3	53.3	95.7	91.4	4.35	21.980		
1,245.6	1,242.5	1,237.7	1,235.6	2.5	2.3	-138.91	-39.9	56.3	103.7	99.1	4.56	22.756		
1,300.0	1,296.3	1,291.2	1,288.8	2.6	2.5	-138.67	-45.6	59.9	113.3	108.5	4.80	23.614		
1,400.0	1,395.3	1,389.6	1,386.4	2.9	2.7	-138.33	-55.9	66.5	131.1	125.8	5.25	24.952		
1,500.0	1,494.2	1,488.0	1,484.1	3.2	3.0	-138.08	-66.2	73.1	148.8	143.1	5.71	26.050		
1,600.0	1,593.1	1,586.4	1,581.7	3.5	3.2	-137.87	-76.5	79.7	166.6	160.4	6.18	26.963		
1,700.0	1,692.0	1,684.8	1,679.3	3.8	3.5	-137.71	-86.8	86.2	184.3	177.7	6.65	27.731		
1,800.0	1,790.9	1,783.2	1,777.0	4.1	3.7	-137.58	-97.1	92.8	202.1	195.0	7.12	28.387		
1,900.0	1,889.8	1,881.7	1,874.6	4.4	4.0	-137.46	-107.4	99.4	219.9	212.3	7.59	28.951		
2,000.0	1,988.7	1,980.1	1,972.3	4.7	4.3	-137.37	-117.7	106.0	237.6	229.6	8.07	29.441		
2,100.0	2,087.6	2,078.5	2,069.9	5.0	4.5	-137.28	-128.0	112.6	255.4	246.9	8.55	29.871		
2,200.0	2,186.6	2,176.9	2,167.6	5.3	4.8	-137.21	-138.3	119.2	273.2	264.1	9.03	30.250		
2,300.0	2,285.5	2,275.3	2,265.2	5.6	5.1	-137.15	-148.7	125.8	290.9	281.4	9.51	30.587		
2,400.0	2,384.4	2,373.7	2,362.9	5.9	5.3	-137.09	-159.0	132.4	308.7	298.7	9.99	30.888		
2,500.0	2,483.3	2,472.1	2,460.5	6.2	5.6	-137.04	-169.3	138.9	326.5	316.0	10.48	31.159		
2,600.0	2,582.2	2,570.5	2,558.1	6.5	5.9	-137.00	-179.6	145.5	344.2	333.3	10.96	31.403		
2,700.0	2,681.1	2,668.9	2,655.8	6.8	6.2	-136.96	-189.9	152.1	362.0	350.5	11.45	31.625		
2,800.0	2,780.0	2,767.3	2,753.4	7.1	6.4	-136.92	-200.2	158.7	379.8	367.8	11.93	31.828		
2,900.0	2,878.9	2,865.7	2,851.1	7.4	6.7	-136.89	-210.5	165.3	397.5	385.1	12.42	32.013		
3,000.0	2,977.9	2,964.2	2,948.7	7.8	7.0	-136.86	-220.8	171.9	415.3	402.4	12.90	32.183		
3,100.0	3,076.8	3,062.6	3,046.4	8.1	7.2	-136.83	-231.1	178.5	433.1	419.7	13.39	32.340		
3,200.0	3,175.7	3,161.0	3,144.0	8.4	7.5	-136.80	-241.5	185.1	450.8	437.0	13.88	32.485		
3,300.0	3,274.6	3,259.4	3,241.7	8.7	7.8	-136.78	-251.8	191.6	468.6	454.2	14.37	32.619		
3,400.0	3,373.5	3,357.8	3,339.3	9.0	8.1	-136.76	-262.1	198.2	486.4	471.5	14.85	32.744		

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 #2	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						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	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	-139.12	-0.6	39.9	40.5	38.8	1.70	23.858		
600.0	600.0	598.8	598.8	1.0	1.0	-139.18	-2.2	41.9	44.5	42.5	2.05	21.727		
700.0	699.9	697.9	697.8	1.2	1.2	-139.25	-4.9	45.2	51.2	48.8	2.40	21.286 SF		
800.0	799.7	796.8	796.5	1.4	1.4	-139.31	-8.7	49.8	60.5	57.7	2.77	21.863		
900.0	899.4	895.2	894.6	1.6	1.6	-139.36	-13.6	55.8	72.4	69.3	3.14	23.078		
1,000.0	998.9	993.1	992.0	1.8	1.8	-139.39	-19.5	62.9	87.0	83.4	3.52	24.698		
1,100.0	1,098.3	1,090.3	1,088.7	2.1	2.1	-139.39	-26.3	71.4	104.1	100.2	3.92	26.569		
1,200.0	1,197.4	1,186.9	1,184.4	2.3	2.3	-139.38	-34.2	81.0	123.8	119.5	4.33	28.585		
1,245.6	1,242.5	1,230.7	1,227.8	2.5	2.4	-139.36	-38.1	85.7	133.7	129.2	4.53	29.541		
1,300.0	1,296.3	1,283.1	1,279.6	2.6	2.6	-139.37	-43.0	91.7	145.9	141.1	4.76	30.643		
1,400.0	1,395.3	1,380.5	1,376.0	2.9	2.9	-139.34	-52.3	103.0	168.5	163.3	5.20	32.382		
1,500.0	1,494.2	1,478.0	1,472.3	3.2	3.1	-139.31	-61.5	114.3	191.0	185.4	5.65	33.817		
1,600.0	1,593.1	1,575.4	1,568.6	3.5	3.4	-139.30	-70.8	125.6	213.6	207.5	6.10	35.017		
1,700.0	1,692.0	1,672.8	1,664.9	3.8	3.7	-139.28	-80.0	136.9	236.2	229.6	6.55	36.034		
1,800.0	1,790.9	1,770.2	1,761.2	4.1	4.0	-139.27	-89.3	148.2	258.8	251.7	7.01	36.904		
1,900.0	1,889.8	1,867.6	1,857.5	4.4	4.3	-139.26	-98.5	159.5	281.3	273.9	7.47	37.657		
2,000.0	1,988.7	1,965.1	1,953.9	4.7	4.6	-139.25	-107.7	170.8	303.9	296.0	7.93	38.313		
2,100.0	2,087.6	2,062.5	2,050.2	5.0	4.9	-139.25	-117.0	182.1	326.5	318.1	8.39	38.891		
2,200.0	2,186.6	2,159.9	2,146.5	5.3	5.2	-139.24	-126.2	193.4	349.0	340.2	8.86	39.402		
2,300.0	2,285.5	2,257.3	2,242.8	5.6	5.5	-139.24	-135.5	204.7	371.6	362.3	9.32	39.858		
2,400.0	2,384.4	2,354.7	2,339.1	5.9	5.8	-139.23	-144.7	216.0	394.2	384.4	9.79	40.266		
2,500.0	2,483.3	2,452.1	2,435.5	6.2	6.1	-139.23	-154.0	227.3	416.8	406.5	10.26	40.634		
2,600.0	2,582.2	2,549.6	2,531.8	6.5	6.4	-139.22	-163.2	238.6	439.3	428.6	10.72	40.968		
2,700.0	2,681.1	2,647.0	2,628.1	6.8	6.7	-139.22	-172.5	249.9	461.9	450.7	11.19	41.271		
2,800.0	2,780.0	2,744.4	2,724.4	7.1	7.0	-139.22	-181.7	261.2	484.5	472.8	11.66	41.548		

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 #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4H-29H-P168 (DROP) - 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	90.03	0.0	50.4	50.4					
100.0	100.0	100.0	100.0	0.2	0.2	90.03	0.0	50.4	50.4	50.1	0.30	166.011		
200.0	200.0	200.0	200.0	0.3	0.3	90.03	0.0	50.4	50.4	49.8	0.65	77.235		
300.0	300.0	300.0	300.0	0.5	0.5	90.03	0.0	50.4	50.4	49.4	1.00	50.324 CC, ES		
400.0	400.0	399.2	399.2	0.7	0.7	90.53	-0.5	51.2	51.2	49.8	1.35	37.888		
500.0	500.0	498.4	498.4	0.9	0.9	-137.80	-1.8	53.4	54.1	52.4	1.70	31.822		
600.0	600.0	597.4	597.3	1.0	1.0	-137.38	-4.0	57.0	59.7	57.7	2.05	29.145		
700.0	699.9	696.1	695.8	1.2	1.2	-137.30	-7.1	62.1	68.2	65.8	2.41	28.356 SF		
800.0	799.7	794.3	793.7	1.4	1.4	-137.45	-11.1	68.6	79.4	76.7	2.77	28.702		
900.0	899.4	892.1	891.0	1.6	1.7	-137.73	-15.9	76.5	93.4	90.3	3.14	29.764		
1,000.0	998.9	989.2	987.5	1.8	1.9	-138.05	-21.5	85.8	110.1	106.6	3.52	31.284		
1,100.0	1,098.3	1,085.5	1,083.1	2.1	2.2	-138.38	-27.9	96.4	129.6	125.6	3.91	33.096		
1,200.0	1,197.4	1,181.1	1,177.6	2.3	2.4	-138.68	-35.1	108.2	151.7	147.4	4.32	35.085		
1,245.6	1,242.5	1,224.9	1,220.9	2.5	2.6	-138.82	-38.7	114.0	162.6	158.1	4.51	36.026		
1,300.0	1,296.3	1,277.6	1,273.0	2.6	2.7	-139.08	-43.0	121.1	175.8	171.1	4.75	37.049		
1,400.0	1,395.3	1,374.6	1,368.8	2.9	3.0	-139.48	-50.8	134.1	200.2	195.0	5.18	38.659		
1,500.0	1,494.2	1,471.6	1,464.6	3.2	3.3	-139.78	-58.7	147.0	224.5	218.9	5.61	39.992		
1,600.0	1,593.1	1,568.6	1,560.4	3.5	3.6	-140.03	-66.6	160.0	248.8	242.8	6.05	41.110		
1,700.0	1,692.0	1,665.6	1,656.2	3.8	3.9	-140.23	-74.5	173.0	273.2	266.7	6.49	42.060		
1,800.0	1,790.9	1,762.6	1,752.0	4.1	4.2	-140.40	-82.4	185.9	297.5	290.6	6.94	42.876		
1,900.0	1,889.8	1,859.6	1,847.8	4.4	4.5	-140.55	-90.2	198.9	321.9	314.5	7.38	43.584		
2,000.0	1,988.7	1,956.6	1,943.6	4.7	4.8	-140.67	-98.1	211.9	346.2	338.4	7.83	44.202		
2,100.0	2,087.6	2,053.6	2,039.3	5.0	5.2	-140.78	-106.0	224.9	370.5	362.3	8.28	44.748		
2,200.0	2,186.6	2,150.5	2,135.1	5.3	5.5	-140.87	-113.9	237.8	394.9	386.2	8.73	45.231		
2,300.0	2,285.5	2,247.5	2,230.9	5.6	5.8	-140.96	-121.7	250.8	419.2	410.1	9.18	45.664		
2,400.0	2,384.4	2,344.5	2,326.7	5.9	6.1	-141.03	-129.6	263.8	443.6	434.0	9.63	46.052		
2,500.0	2,483.3	2,441.5	2,422.5	6.2	6.4	-141.10	-137.5	276.7	467.9	457.9	10.08	46.402		
2,600.0	2,582.2	2,538.5	2,518.3	6.5	6.7	-141.16	-145.4	289.7	492.3	481.8	10.54	46.720		

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 #2	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	996.136		
200.0	200.0	211.5	211.5	0.3	0.4	2.16	325.8	12.3	326.1	325.4	0.67	483.832		
300.0	300.0	317.2	317.1	0.5	0.6	2.14	322.4	12.0	322.9	321.9	1.04	309.882		
400.0	400.0	420.7	420.3	0.7	0.8	1.07	317.8	6.0	318.3	316.8	1.44	221.402		
500.0	500.0	521.3	520.2	0.9	1.0	130.07	312.5	-5.1	313.6	311.7	1.82	172.564		
600.0	600.0	618.0	615.6	1.0	1.3	127.64	307.7	-20.3	310.7	308.4	2.29	135.413		
653.5	653.4	668.9	665.5	1.1	1.5	126.16	305.4	-29.8	310.2	307.7	2.58	120.456	CC, ES	
700.0	699.9	712.6	708.2	1.2	1.7	124.80	303.7	-38.7	310.6	307.7	2.84	109.501		
800.0	799.7	803.4	796.6	1.4	2.0	121.79	301.1	-59.3	314.1	310.7	3.42	91.806		
900.0	899.4	891.0	881.4	1.6	2.4	118.90	301.3	-81.1	322.9	318.9	4.02	80.283		
1,000.0	998.9	987.0	974.3	1.8	2.9	116.11	303.1	-105.4	335.0	330.3	4.66	71.838		
1,100.0	1,098.3	1,082.3	1,066.5	2.1	3.3	113.79	305.5	-129.4	349.1	343.8	5.32	65.687		
1,200.0	1,197.4	1,174.8	1,155.7	2.3	3.8	111.78	308.6	-153.9	365.6	359.6	5.98	61.111		
1,245.6	1,242.5	1,216.4	1,195.7	2.5	4.0	110.96	310.4	-165.3	374.0	367.7	6.29	59.465		
1,300.0	1,296.3	1,264.2	1,241.4	2.6	4.2	110.16	312.9	-178.5	384.7	378.0	6.65	57.861		
1,400.0	1,395.3	1,349.9	1,323.3	2.9	4.7	108.78	319.2	-203.3	406.9	399.6	7.29	55.786		
1,500.0	1,494.2	1,446.1	1,415.0	3.2	5.2	107.44	327.5	-231.2	430.6	422.6	7.99	53.876		
1,600.0	1,593.1	1,542.1	1,506.4	3.5	5.7	106.25	335.9	-259.0	454.6	446.0	8.67	52.415		
1,700.0	1,692.0	1,642.0	1,601.6	3.8	6.3	105.11	344.6	-288.1	478.8	469.4	9.37	51.115		
9,100.0	8,036.0	8,263.4	8,062.6	24.6	29.3	-92.69	679.2	-1,364.2	495.2	459.6	35.56	13.925		
9,200.0	8,036.0	8,261.7	8,060.9	25.5	29.3	-92.49	679.3	-1,364.3	481.1	444.3	36.78	13.081		
9,218.8	8,036.0	8,261.3	8,060.5	25.7	29.3	-92.45	679.3	-1,364.3	480.7	443.7	37.02	12.986		
9,300.0	8,036.0	8,259.9	8,059.1	26.6	29.3	-92.28	679.3	-1,364.3	487.5	449.4	38.06	12.807	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 #2	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		
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	901.859		
200.0	200.0	203.0	203.0	0.3	0.4	20.18	280.0	102.9	298.3	297.6	0.68	439.321		
300.0	300.0	303.0	303.0	0.5	0.5	20.27	279.8	103.4	298.3	297.3	1.03	290.389		
400.0	400.0	403.0	403.0	0.7	0.7	20.40	279.6	104.0	298.3	296.9	1.38	216.870		
500.0	500.0	503.0	503.0	0.9	0.9	151.50	279.3	104.8	299.1	297.3	1.73	172.628		
600.0	600.0	602.9	602.9	1.0	1.1	151.92	278.9	105.8	301.4	299.3	2.08	144.717		
700.0	699.9	702.7	702.7	1.2	1.2	152.52	278.5	106.9	305.3	302.9	2.43	125.449		
800.0	799.7	802.5	802.5	1.4	1.4	153.27	278.0	108.2	310.8	308.0	2.79	111.570		
900.0	899.4	902.1	902.0	1.6	1.6	154.16	277.5	109.7	317.9	314.8	3.14	101.289		
1,000.0	998.9	1,001.5	1,001.4	1.8	1.8	155.17	276.9	111.4	326.7	323.2	3.49	93.540		
1,100.0	1,098.3	1,110.2	1,110.1	2.1	1.9	156.34	275.1	112.7	336.1	332.2	3.86	86.959		
1,200.0	1,197.4	1,227.5	1,227.2	2.3	2.2	157.51	269.3	111.0	343.0	338.8	4.25	80.692		
1,245.6	1,242.5	1,282.9	1,282.4	2.5	2.3	158.17	264.2	109.6	344.8	340.4	4.43	77.768		
1,300.0	1,296.3	1,344.4	1,343.4	2.6	2.4	159.07	256.8	108.1	345.8	341.2	4.65	74.389		
1,400.0	1,395.3	1,456.4	1,454.1	2.9	2.7	160.86	240.3	104.8	345.3	340.3	5.04	68.475		
1,500.0	1,494.2	1,568.5	1,564.3	3.2	3.0	162.73	219.9	99.6	341.2	335.8	5.45	62.665		
1,600.0	1,593.1	1,674.4	1,667.6	3.5	3.4	164.82	197.3	94.6	334.6	328.8	5.85	57.222		
1,700.0	1,692.0	1,782.2	1,772.2	3.8	3.8	166.96	172.6	87.6	326.1	319.9	6.26	52.097		
1,800.0	1,790.9	1,881.3	1,868.1	4.1	4.2	169.22	148.1	81.1	316.6	309.9	6.68	47.380		
1,900.0	1,889.8	1,976.4	1,960.2	4.4	4.5	171.70	124.7	76.3	308.5	301.4	7.12	43.339		
2,000.0	1,988.7	2,077.4	2,057.8	4.7	5.0	174.58	99.3	71.5	301.0	293.4	7.61	39.555		
2,100.0	2,087.6	2,175.2	2,152.1	5.0	5.4	177.66	74.0	67.3	294.0	285.9	8.14	36.137		
2,200.0	2,186.6	2,272.3	2,246.0	5.3	5.9	-179.19	49.4	63.4	288.5	279.8	8.70	33.174		
2,300.0	2,285.5	2,370.1	2,340.7	5.6	6.3	-176.10	25.4	58.9	284.0	274.7	9.29	30.577		
2,400.0	2,384.4	2,468.9	2,436.5	5.9	6.7	-172.95	1.7	54.6	280.9	271.0	9.93	28.291		
2,500.0	2,483.3	2,569.3	2,533.7	6.2	7.2	-169.59	-23.2	49.9	278.0	267.4	10.64	26.133		
2,600.0	2,582.2	2,668.5	2,629.6	6.5	7.6	-166.17	-48.1	45.2	275.8	264.5	11.38	24.232		
2,700.0	2,681.1	2,766.6	2,724.6	6.8	8.1	-162.99	-71.8	39.8	274.4	262.3	12.14	22.612		
2,746.5	2,727.1	2,811.7	2,768.4	7.0	8.3	-161.58	-82.3	37.4	274.3	261.8	12.49	21.954 CC		
2,800.0	2,780.0	2,863.5	2,818.7	7.1	8.5	-159.91	-94.6	34.8	274.5	261.6	12.92	21.243		
2,900.0	2,878.9	2,966.9	2,918.8	7.4	9.0	-156.44	-119.8	29.7	275.3	261.5	13.81	19.944		
2,943.0	2,921.5	3,010.8	2,961.2	7.6	9.2	-154.94	-130.9	26.9	275.3	261.1	14.20	19.388		
3,000.0	2,977.9	3,066.7	3,015.1	7.8	9.4	-152.98	-145.2	23.4	275.5	260.8	14.72	18.715 ES		
3,100.0	3,076.8	3,162.9	3,107.9	8.1	9.9	-149.59	-169.9	17.8	277.0	261.4	15.63	17.720		
3,200.0	3,175.7	3,265.6	3,207.2	8.4	10.4	-146.22	-195.4	11.5	279.5	262.9	16.58	16.855		
3,300.0	3,274.6	3,363.6	3,302.0	8.7	10.8	-143.19	-219.2	4.7	282.1	264.6	17.50	16.121		
3,400.0	3,373.5	3,460.1	3,395.1	9.0	11.3	-139.99	-244.0	-1.3	286.0	267.5	18.46	15.491		
3,500.0	3,472.4	3,559.5	3,490.8	9.3	11.8	-136.61	-270.4	-7.5	291.1	271.6	19.45	14.964		
3,600.0	3,571.3	3,654.1	3,582.1	9.6	12.2	-133.73	-294.5	-12.6	297.7	277.4	20.35	14.629		
3,700.0	3,670.3	3,754.7	3,679.5	9.9	12.7	-131.05	-318.9	-17.7	305.4	284.1	21.25	14.374		
3,800.0	3,769.2	3,855.8	3,777.4	10.2	13.2	-128.44	-343.6	-23.5	313.0	290.8	22.15	14.134		
3,900.0	3,868.1	3,956.1	3,874.3	10.5	13.7	-125.85	-368.5	-30.2	320.4	297.4	23.03	13.912		
4,000.0	3,967.0	4,053.2	3,968.0	10.9	14.1	-123.38	-393.2	-36.7	328.6	304.8	23.89	13.756		
4,100.0	4,065.9	4,150.0	4,061.5	11.2	14.6	-121.11	-417.5	-42.5	338.0	313.2	24.71	13.676		
4,200.0	4,164.8	4,248.4	4,156.8	11.5	15.0	-119.06	-441.6	-47.8	348.2	322.7	25.49	13.661 SF		
4,300.0	4,263.7	4,351.2	4,257.0	11.8	15.4	-117.53	-463.8	-52.8	358.3	332.1	26.21	13.670		
4,400.0	4,362.6	4,452.3	4,356.3	12.1	15.8	-116.67	-482.0	-57.4	367.5	340.7	26.87	13.680		
4,500.0	4,461.6	4,551.9	4,454.6	12.4	16.1	-116.19	-498.0	-61.1	376.8	349.3	27.48	13.713		
4,600.0	4,560.5	4,653.3	4,554.9	12.7	16.4	-116.07	-512.0	-64.3	385.8	357.7	28.05	13.752		
4,700.0	4,659.4	4,755.1	4,656.1	13.0	16.7	-116.33	-523.6	-67.0	394.3	365.7	28.58	13.794		
4,800.0	4,758.3	4,853.4	4,754.0	13.3	16.8	-117.01	-531.8	-68.6	402.6	373.5	29.05	13.858		

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 #2	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	
4,900.0	4,857.2	4,954.0	4,854.3	13.6	17.0	-117.93	-538.6	-69.5	411.1	381.6	29.50	13.935	
5,000.0	4,956.1	5,057.1	4,957.3	14.0	17.2	-118.87	-545.1	-70.8	419.1	389.1	29.94	13.996	
5,100.0	5,055.0	5,160.6	5,060.5	14.3	17.4	-119.88	-550.5	-73.0	426.1	395.7	30.36	14.036	
5,200.0	5,153.9	5,255.9	5,155.9	14.6	17.5	-121.18	-552.7	-73.8	433.5	402.9	30.68	14.132	
5,300.0	5,252.9	5,356.0	5,255.9	14.9	17.6	-122.71	-553.6	-74.0	441.5	410.5	30.98	14.253	
5,400.0	5,351.8	5,456.3	5,356.2	15.2	17.7	-124.20	-554.2	-74.3	449.5	418.3	31.26	14.382	
5,500.0	5,450.7	5,557.3	5,457.2	15.5	17.8	-125.66	-554.8	-75.0	457.5	425.9	31.52	14.512	
5,600.0	5,549.6	5,657.5	5,557.4	15.8	17.9	-127.06	-555.2	-76.1	465.3	433.5	31.78	14.641	
5,700.0	5,648.5	5,756.5	5,656.4	16.1	18.0	-128.37	-555.8	-77.3	473.3	441.3	32.03	14.777	
5,800.0	5,747.4	5,855.3	5,755.2	16.4	18.1	-129.63	-556.4	-78.4	481.6	449.3	32.27	14.925	
5,900.0	5,846.3	5,953.6	5,853.6	16.8	18.2	-130.87	-556.9	-79.4	490.2	457.7	32.49	15.089	
6,000.0	5,945.2	6,052.6	5,952.5	17.1	18.3	-132.11	-557.0	-80.2	499.2	466.5	32.69	15.269	

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 #2	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											
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(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	297.898						
400.0	400.0	377.5	377.4	0.7	0.7	22.19	278.4	113.5	300.9	299.5	1.35	222.392						
500.0	500.0	470.4	470.0	0.9	0.9	154.09	280.9	120.3	307.0	305.3	1.70	180.276						
600.0	600.0	562.5	561.6	1.0	1.1	155.58	284.4	129.9	317.1	315.0	2.07	152.866						
700.0	699.9	653.4	651.5	1.2	1.4	157.41	288.8	142.0	331.3	328.8	2.46	134.779						
800.0	799.7	742.8	739.5	1.4	1.7	159.45	294.1	156.5	349.9	347.0	2.85	122.704						
900.0	899.4	830.3	825.3	1.6	2.0	161.61	300.3	173.2	372.9	369.6	3.25	114.884						
1,000.0	998.9	921.4	913.9	1.8	2.4	163.88	307.5	192.7	400.1	396.4	3.65	109.698						
1,100.0	1,098.3	1,015.6	1,005.6	2.1	2.8	166.02	315.0	213.1	429.7	425.7	4.04	106.253						
1,200.0	1,197.4	1,109.3	1,096.7	2.3	3.2	167.93	322.4	233.4	461.5	457.1	4.43	104.217						
1,245.6	1,242.5	1,151.8	1,138.1	2.5	3.4	168.72	325.8	242.6	476.7	472.1	4.60	103.640						
1,300.0	1,296.3	1,202.4	1,187.3	2.6	3.6	169.66	329.8	253.6	495.1	490.3	4.80	103.068	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 #2	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	8,259.8	8,070.9	68.5	28.2	89.63	4,019.4	-790.0	466.3	376.6	89.76	5.195		
12,200.0	8,036.0	8,259.8	8,071.0	70.1	28.2	89.64	4,019.4	-790.0	374.6	283.1	91.47	4.095		
12,300.0	8,036.0	8,259.8	8,071.0	71.8	28.2	89.65	4,019.4	-790.0	288.4	195.2	93.19	3.095		
12,400.0	8,036.0	8,259.8	8,071.0	73.5	28.2	89.66	4,019.4	-790.0	214.6	119.7	94.90	2.262		
12,500.0	8,036.0	8,259.9	8,071.0	75.1	28.2	89.67	4,019.4	-790.0	170.1	73.5	96.62	1.760		
12,535.7	8,036.0	8,259.9	8,071.0	75.7	28.2	89.67	4,019.4	-790.0	166.3	69.1	97.23	1.711	CC, ES, SF	
12,600.0	8,036.0	8,259.9	8,071.1	76.8	28.2	89.68	4,019.4	-790.0	178.3	80.0	98.34	1.813		
12,638.3	8,036.0	8,259.9	8,071.1	77.5	28.2	89.68	4,019.4	-790.0	195.4	96.4	99.00	1.974		
12,700.0	8,036.0	8,259.9	8,071.1	78.5	28.2	89.70	4,019.4	-790.0	233.3	133.9	99.42	2.347		
12,800.0	8,036.0	8,260.0	8,071.2	80.2	28.2	89.72	4,019.4	-790.0	309.8	209.8	100.04	3.097		
12,888.3	8,036.0	8,260.0	8,071.2	81.6	28.2	89.76	4,019.4	-790.0	385.1	284.6	100.51	3.831		
12,900.0	8,036.0	8,260.1	8,071.2	81.8	28.2	89.76	4,019.4	-790.0	395.4	294.7	100.71	3.926		
13,000.0	8,036.0	8,260.1	8,071.3	83.5	28.2	89.78	4,019.4	-790.0	486.0	383.5	102.45	4.743		

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 #2	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							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			
10,738.3	8,036.0	8,161.9	8,047.3	46.6	21.2	83.85	2,659.3	-755.0	481.8	423.8	58.05	8.301			
10,800.0	8,036.0	8,164.1	8,049.5	47.5	21.2	84.47	2,659.3	-754.9	426.6	367.5	59.13	7.215			
10,900.0	8,036.0	8,167.7	8,053.2	49.1	21.2	85.51	2,659.5	-754.8	341.9	281.0	60.89	5.615			
11,000.0	8,036.0	8,171.5	8,056.9	50.6	21.2	86.57	2,659.6	-754.7	267.8	205.2	62.65	4.275			
11,100.0	8,036.0	8,175.4	8,060.8	52.2	21.2	87.67	2,659.8	-754.6	215.8	151.4	64.40	3.350			
11,176.1	8,036.0	8,178.4	8,063.8	53.4	21.2	88.53	2,659.9	-754.5	201.9	136.2	65.73	3.072	CC, ES, SF		
11,200.0	8,036.0	8,179.4	8,064.8	53.8	21.2	88.80	2,659.9	-754.5	203.3	137.2	66.14	3.074			
11,300.0	8,036.0	8,183.5	8,068.9	55.4	21.2	89.97	2,660.1	-754.4	236.8	169.0	67.87	3.490			
11,400.0	8,036.0	8,187.7	8,073.1	57.0	21.3	91.17	2,660.3	-754.3	301.4	231.8	69.57	4.332			
11,500.0	8,036.0	8,192.1	8,077.5	58.6	21.3	92.40	2,660.4	-754.2	381.5	310.2	71.25	5.353			
11,600.0	8,036.0	8,196.6	8,082.0	60.3	21.3	93.67	2,660.6	-754.1	469.2	396.3	72.91	6.436			

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 #2	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									
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	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	1,087.880			
200.0	200.0	199.4	199.4	0.3	0.3	0.01	340.4	0.1	340.4	339.8	0.65	522.222			
300.0	300.0	299.3	299.3	0.5	0.5	-0.13	341.6	-0.8	341.6	340.6	1.00	341.350			
400.0	400.0	400.5	400.5	0.7	0.7	-0.35	342.5	-2.1	342.5	341.2	1.35	253.399			
500.0	500.0	498.4	498.3	0.9	0.9	130.30	343.5	-3.9	344.1	342.4	1.70	202.156			
600.0	600.0	598.5	598.4	1.0	1.0	130.00	344.8	-7.6	347.2	345.1	2.06	168.249			
700.0	699.9	699.1	698.8	1.2	1.2	129.66	345.9	-12.8	351.1	348.7	2.43	144.231			
800.0	799.7	796.0	795.5	1.4	1.4	129.44	347.3	-18.5	356.6	353.8	2.81	127.012			
900.0	899.4	891.1	890.5	1.6	1.6	129.55	349.7	-23.3	364.2	361.0	3.18	114.525			
1,000.0	998.9	985.9	985.2	1.8	1.8	129.90	353.3	-27.6	374.2	370.6	3.56	105.069			
1,100.0	1,098.3	1,079.8	1,078.8	2.1	2.0	130.40	358.0	-31.8	386.6	382.7	3.95	97.837			
1,200.0	1,197.4	1,170.9	1,169.7	2.3	2.2	131.00	364.1	-36.0	401.8	397.5	4.35	92.329			
1,245.6	1,242.5	1,211.3	1,209.8	2.5	2.3	131.22	367.5	-38.3	409.9	405.3	4.54	90.247			
1,300.0	1,296.3	1,259.2	1,257.3	2.6	2.4	131.45	372.0	-41.9	420.3	415.5	4.77	88.060			
1,400.0	1,395.3	1,346.4	1,343.6	2.9	2.7	131.66	382.0	-49.7	441.2	436.0	5.21	84.732			
1,500.0	1,494.2	1,434.5	1,430.4	3.2	2.9	131.67	394.1	-59.0	464.4	458.7	5.66	82.022			
1,600.0	1,593.1	1,522.0	1,516.1	3.5	3.2	131.46	407.8	-70.0	489.5	483.4	6.14	79.766			
9,400.0	8,036.0	8,193.3	8,026.9	27.7	26.4	85.90	1,350.6	-749.5	487.4	440.9	46.55	10.471			
9,500.0	8,036.0	8,195.4	8,028.9	28.9	26.4	86.59	1,350.7	-749.5	395.2	347.2	47.99	8.234			
9,600.0	8,036.0	8,197.4	8,031.0	30.1	26.4	87.29	1,350.7	-749.4	307.8	258.3	49.47	6.221			
9,700.0	8,036.0	8,199.6	8,033.1	31.4	26.4	88.01	1,350.8	-749.4	230.8	179.9	50.98	4.528			
9,800.0	8,036.0	8,201.7	8,035.3	32.8	26.4	88.75	1,350.8	-749.4	178.4	125.9	52.52	3.397			
9,857.3	8,036.0	8,203.0	8,036.6	33.5	26.4	89.18	1,350.9	-749.4	169.0	115.6	53.41	3.164	CC, ES, SF		
9,900.0	8,036.0	8,203.9	8,037.5	34.1	26.4	89.50	1,350.9	-749.3	174.3	120.2	54.08	3.223			
10,000.0	8,036.0	8,206.2	8,039.8	35.5	26.4	90.26	1,350.9	-749.3	221.2	165.5	55.65	3.974			
10,100.0	8,036.0	8,208.5	8,042.1	37.0	26.4	91.04	1,351.0	-749.3	295.7	238.5	57.23	5.167			
10,200.0	8,036.0	8,210.8	8,044.4	38.4	26.4	91.83	1,351.0	-749.3	382.0	323.2	58.82	6.495			
10,300.0	8,036.0	8,213.2	8,046.8	39.9	26.4	92.64	1,351.1	-749.2	473.8	413.3	60.42	7.842			

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 #2	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				Total		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	Separation Factor			
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	1,031.140			
200.0	200.0	191.5	191.4	0.3	0.3	6.46	319.2	36.1	321.2	320.5	0.66	483.810			
300.0	300.0	294.5	294.4	0.5	0.5	6.82	318.1	38.0	320.4	319.4	1.02	315.150			
400.0	400.0	393.5	393.5	0.7	0.7	6.70	316.9	37.2	319.0	317.7	1.36	234.178			
500.0	500.0	494.4	494.3	0.9	0.9	137.19	316.0	34.5	318.5	316.8	1.71	185.877			
519.6	519.6	514.6	514.5	0.9	0.9	137.13	315.7	33.8	318.5	316.7	1.78	178.590			
600.0	600.0	596.7	596.5	1.0	1.0	136.85	314.6	30.6	318.6	316.6	2.07	154.018			
700.0	699.9	694.1	693.8	1.2	1.2	136.72	313.4	26.9	320.2	317.8	2.42	132.283			
800.0	799.7	793.2	792.9	1.4	1.4	137.05	312.5	24.6	323.5	320.8	2.78	116.447			
900.0	899.4	891.7	891.4	1.6	1.6	137.63	311.9	22.8	328.6	325.4	3.14	104.619			
1,000.0	998.9	991.8	991.5	1.8	1.8	138.38	311.5	20.9	335.0	331.5	3.51	95.407			
1,100.0	1,098.3	1,091.8	1,091.5	2.1	1.9	139.23	310.9	18.6	342.7	338.8	3.89	88.090			
1,200.0	1,197.4	1,191.1	1,190.7	2.3	2.1	140.21	310.4	16.4	351.8	347.5	4.27	82.326			
1,245.6	1,242.5	1,236.7	1,236.3	2.5	2.2	140.70	310.1	15.3	356.4	351.9	4.45	80.092			
1,300.0	1,296.3	1,290.4	1,290.0	2.6	2.3	141.30	309.8	14.0	362.1	357.4	4.66	77.678			
1,400.0	1,395.3	1,390.4	1,389.9	2.9	2.5	142.39	309.2	11.7	372.6	367.6	5.05	73.797			
1,500.0	1,494.2	1,497.5	1,497.0	3.2	2.7	143.53	307.5	9.3	382.4	377.0	5.45	70.150			
1,600.0	1,593.1	1,604.8	1,604.1	3.5	2.9	144.12	304.0	3.0	389.8	384.0	5.87	66.428			
1,700.0	1,692.0	1,714.4	1,713.0	3.8	3.1	144.15	299.1	-7.7	395.2	388.9	6.32	62.576			
1,800.0	1,790.9	1,820.0	1,817.5	4.1	3.4	143.71	293.1	-21.5	398.6	391.8	6.79	58.743			
1,900.0	1,889.8	1,927.0	1,923.0	4.4	3.7	142.99	286.0	-37.9	400.5	393.2	7.29	54.958			
2,000.0	1,988.7	2,034.1	2,028.2	4.7	4.0	142.08	276.9	-56.0	400.4	392.6	7.82	51.191			
2,100.0	2,087.6	2,138.4	2,130.1	5.0	4.4	140.90	267.2	-75.9	399.2	390.8	8.40	47.522			
2,200.0	2,186.6	2,239.5	2,228.2	5.3	4.8	139.28	257.5	-98.4	397.2	388.2	9.04	43.945			
2,300.0	2,285.5	2,342.4	2,327.5	5.6	5.2	137.32	247.5	-123.3	395.3	385.5	9.74	40.601			
2,400.0	2,384.4	2,444.7	2,426.3	5.9	5.7	135.40	236.4	-147.9	392.6	382.2	10.46	37.534			
2,500.0	2,483.3	2,546.7	2,524.6	6.2	6.1	133.50	224.6	-172.2	389.7	378.5	11.21	34.772			
2,600.0	2,582.2	2,641.4	2,616.0	6.5	6.6	131.77	213.8	-194.3	387.4	375.4	11.94	32.449			
2,694.5	2,675.7	2,730.6	2,702.4	6.8	6.9	130.18	204.7	-214.9	386.6	374.0	12.64	30.594			
2,700.0	2,681.1	2,735.8	2,707.4	6.8	7.0	130.09	204.2	-216.1	386.6	374.0	12.68	30.496			
2,800.0	2,780.0	2,838.5	2,806.6	7.1	7.5	128.12	194.0	-240.6	386.5	373.0	13.52	28.596			
2,900.0	2,878.9	2,938.1	2,902.5	7.4	7.9	126.11	183.5	-265.0	386.3	372.0	14.35	26.913			
2,924.3	2,903.0	2,962.4	2,926.0	7.5	8.0	125.62	180.9	-270.9	386.3	371.8	14.56	26.525			
3,000.0	2,977.9	3,037.0	2,997.8	7.8	8.4	124.06	172.9	-289.5	386.5	371.2	15.22	25.389			
3,100.0	3,076.8	3,115.0	3,072.8	8.1	8.8	122.37	164.9	-309.5	388.2	372.2	15.98	24.286			
3,200.0	3,175.7	3,165.2	3,122.0	8.4	8.7	122.02	164.9	-318.1	399.7	383.5	16.26	24.583			
3,300.0	3,274.6	3,333.1	3,286.4	8.7	9.3	123.00	179.6	-333.9	422.5	405.5	17.02	24.819			
3,400.0	3,373.5	3,439.7	3,389.6	9.0	9.8	121.25	169.4	-358.7	424.3	406.4	17.89	23.713			
3,500.0	3,472.4	3,541.6	3,488.0	9.3	10.2	119.48	158.9	-383.0	425.9	407.1	18.77	22.688			
3,600.0	3,571.3	3,644.7	3,587.3	9.6	10.7	117.62	147.1	-407.9	426.8	407.1	19.64	21.725			
3,700.0	3,670.3	3,744.3	3,683.8	9.9	11.2	116.13	135.7	-429.9	427.5	407.1	20.48	20.881			
3,800.0	3,769.2	3,844.7	3,780.8	10.2	11.7	114.49	124.0	-452.9	428.6	407.3	21.34	20.089			
3,900.0	3,868.1	3,936.1	3,868.9	10.5	12.1	112.88	113.4	-474.9	430.5	408.4	22.17	19.421			
4,000.0	3,967.0	4,024.4	3,953.9	10.9	12.6	111.29	105.1	-497.3	435.2	412.2	22.98	18.939			
4,100.0	4,065.9	4,124.1	4,049.9	11.2	13.1	109.55	97.2	-522.9	441.9	418.0	23.85	18.527			
4,200.0	4,164.8	4,228.5	4,150.6	11.5	13.6	107.84	88.0	-548.9	447.8	423.1	24.71	18.120			
4,300.0	4,263.7	4,322.2	4,241.4	11.8	14.0	106.56	80.2	-570.7	453.9	428.4	25.48	17.816			
4,400.0	4,362.6	4,414.5	4,331.4	12.1	14.4	105.59	74.8	-590.8	461.7	435.5	26.17	17.640			
4,500.0	4,461.6	4,515.9	4,430.6	12.4	14.8	104.88	70.4	-611.0	470.3	443.4	26.88	17.495			
4,600.0	4,560.5	4,616.0	4,528.9	12.7	15.1	104.36	66.4	-629.6	478.6	451.0	27.55	17.372			
4,700.0	4,659.4	4,711.9	4,623.5	13.0	15.4	104.19	64.0	-645.1	487.2	459.1	28.14	17.311			

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 #2	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						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
4,800.0	4,758.3	4,819.3	4,729.9	13.3	15.7	104.41	62.5	-659.4	495.5	466.8	28.72	17.253		
8,100.0	7,939.7	8,013.9	7,921.4	21.2	19.2	41.68	50.0	-659.7	469.7	445.7	24.04	19.541		
8,150.0	7,965.5	8,039.7	7,947.3	21.1	19.3	47.71	50.2	-659.0	432.3	408.4	23.99	18.025		
8,200.0	7,987.5	8,061.9	7,969.4	21.0	19.3	55.00	50.4	-658.4	393.9	369.2	24.71	15.939		
8,250.0	8,005.6	8,080.2	7,987.7	21.0	19.3	63.19	50.6	-657.9	355.0	329.0	26.00	13.656		
8,300.0	8,019.5	8,094.5	8,002.0	20.9	19.3	71.56	50.8	-657.5	316.8	289.4	27.38	11.569		
8,350.0	8,029.3	8,104.6	8,012.2	20.9	19.3	79.14	50.9	-657.3	280.2	251.8	28.45	9.851		
8,400.0	8,034.7	8,110.6	8,018.1	20.9	19.3	85.07	50.9	-657.1	247.1	218.0	29.08	8.499		
8,438.3	8,036.0	8,112.2	8,019.7	20.9	19.3	88.14	51.0	-657.1	225.4	196.0	29.34	7.683		
8,500.0	8,036.0	8,112.8	8,020.3	21.0	19.3	88.31	51.0	-657.0	200.7	171.2	29.48	6.808		
8,554.3	8,036.0	8,113.3	8,020.8	21.2	19.3	88.47	51.0	-657.0	193.2	163.5	29.68	6.509 CC, ES, SF		
8,600.0	8,036.0	8,113.8	8,021.3	21.3	19.3	88.60	51.0	-657.0	198.5	168.6	29.87	6.645		
8,700.0	8,036.0	8,114.7	8,022.3	21.7	19.3	88.89	51.0	-657.0	242.0	211.5	30.46	7.944		
8,800.0	8,036.0	8,115.7	8,023.2	22.3	19.3	89.18	51.0	-657.0	312.5	281.3	31.21	10.014		
8,900.0	8,036.0	8,116.7	8,024.2	22.9	19.3	89.47	51.0	-656.9	396.0	363.9	32.10	12.334		
8,938.3	8,036.0	8,117.1	8,024.6	23.2	19.3	89.58	51.0	-656.9	429.8	397.3	32.48	13.232		
9,000.0	8,036.0	8,117.7	8,025.2	23.7	19.3	89.76	51.0	-656.9	485.7	452.6	33.13	14.663		

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 #2	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							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
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	975.598		
200.0	200.0	203.4	203.4	0.3	0.3	9.54	310.4	52.2	314.7	314.0	0.66	476.117	ES	
300.0	300.0	298.9	298.9	0.5	0.5	9.79	310.9	53.7	315.6	314.6	1.00	314.053		
400.0	400.0	389.8	389.7	0.7	0.7	10.14	313.3	56.0	318.6	317.2	1.35	235.929		
500.0	500.0	481.8	481.6	0.9	0.9	141.48	318.0	59.4	325.0	323.3	1.68	193.167		
600.0	600.0	570.7	570.1	1.0	1.1	142.13	324.9	63.4	335.5	333.5	2.02	166.160		
700.0	699.9	656.3	655.0	1.2	1.3	142.91	334.3	68.4	350.9	348.5	2.35	149.151		
800.0	799.7	741.9	739.4	1.4	1.6	143.82	346.7	74.5	371.4	368.7	2.69	138.116		
900.0	899.4	826.2	822.2	1.6	1.9	144.84	361.2	81.9	396.5	393.5	3.03	130.951		
1,000.0	998.9	911.7	905.5	1.8	2.2	145.98	378.1	91.0	426.1	422.7	3.37	126.385		
1,100.0	1,098.3	1,002.8	993.9	2.1	2.6	147.23	397.1	101.7	458.7	455.0	3.73	123.085		
1,200.0	1,197.4	1,089.4	1,077.9	2.3	3.0	148.44	415.3	112.6	493.3	489.2	4.07	121.080	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 #2	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			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	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	160.06	256.1	142.8	294.1	292.4	1.71	172.118		
600.0	600.0	592.0	592.0	1.0	1.0	160.22	256.1	142.8	296.5	294.5	2.06	144.127		
700.0	699.9	691.9	691.9	1.2	1.2	160.49	256.1	142.8	300.6	298.2	2.41	124.932		
800.0	799.7	791.7	791.7	1.4	1.4	160.85	256.1	142.8	306.4	303.7	2.76	111.188		
900.0	899.4	891.4	891.4	1.6	1.6	161.30	256.1	142.8	313.8	310.7	3.11	101.062		
1,000.0	998.9	990.9	990.9	1.8	1.7	161.82	256.1	142.8	322.9	319.5	3.46	93.462		
1,100.0	1,098.3	1,090.9	1,090.9	2.1	1.9	162.64	255.3	144.0	333.6	329.8	3.81	87.643		
1,200.0	1,197.4	1,190.3	1,190.2	2.3	2.1	164.07	252.5	148.0	345.9	341.7	4.16	83.140		
1,245.6	1,242.5	1,235.4	1,235.1	2.5	2.2	164.89	250.5	150.7	352.1	347.8	4.32	81.412		
1,300.0	1,296.3	1,288.9	1,288.4	2.6	2.3	166.00	247.7	154.7	359.8	355.3	4.53	79.514		
1,400.0	1,395.3	1,386.4	1,385.3	2.9	2.5	168.31	241.1	164.1	374.4	369.5	4.91	76.276		
1,500.0	1,494.2	1,482.9	1,480.6	3.2	2.7	170.90	232.6	176.0	389.8	384.5	5.32	73.327		
1,600.0	1,593.1	1,578.4	1,574.5	3.5	3.0	173.71	222.5	190.2	406.4	400.6	5.75	70.712		
1,700.0	1,692.0	1,674.8	1,669.1	3.8	3.3	176.46	211.7	205.4	424.0	417.8	6.20	68.414		
1,800.0	1,790.9	1,771.1	1,763.6	4.1	3.6	178.99	200.9	220.6	442.6	436.0	6.66	66.455		
1,900.0	1,889.8	1,867.5	1,858.2	4.4	3.9	-178.68	190.2	235.8	462.0	454.9	7.13	64.784		
2,000.0	1,988.7	1,963.9	1,952.7	4.7	4.2	-176.54	179.4	251.0	482.1	474.5	7.61	63.360 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - WILLIAM PELTIER 1A-20H (EXISTING) - ENCANA WELL													Offset Site Error: 0.0 ft
Survey Program: 911-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	
16,900.0	8,036.0	9,573.0	7,725.6	150.2	46.0	-19.73	8,715.3	-862.0	463.8	392.5	71.31	6.504	
17,000.0	8,036.0	9,547.0	7,724.0	151.9	45.4	-15.25	8,722.0	-836.9	395.5	333.4	62.05	6.374	
17,100.0	8,036.0	9,522.4	7,722.7	153.7	44.9	-10.86	8,728.3	-813.2	341.1	287.6	53.55	6.371 SF	
17,200.0	8,036.0	9,497.5	7,721.3	155.4	44.3	-6.33	8,734.8	-789.1	308.4	262.2	46.23	6.671	
17,264.1	8,036.0	9,480.6	7,720.4	156.5	43.9	-3.25	8,739.4	-773.0	302.1	259.2	42.88	7.045 CC, ES	
17,289.1	8,036.0	9,473.9	7,720.0	157.0	43.7	-2.02	8,741.2	-766.5	303.1	261.0	42.08	7.203	

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: DJ Wattenberg
Reference Site: S29-T1N-R68W (Pratt/Waste Connections)
Site Error: 0.0ft
Reference Well: Pratt 4C-29H-P168
Well Error: 0.0ft
Reference Wellbore: Hz
Reference Design: Plan #2

Local Co-ordinate Reference: Well Pratt 4C-29H-P168
TVD Reference: WELL @ 5189.0ft (Original Well Elev)
MD Reference: WELL @ 5189.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
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°

