

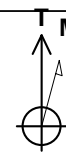


Project: DJ Wattenberg
Site: S29-T1N-R68W (Pratt/Waste Connections)
Well: Pratt 4C-29H-P168
Wellbore: HZ
Design: Plan #4

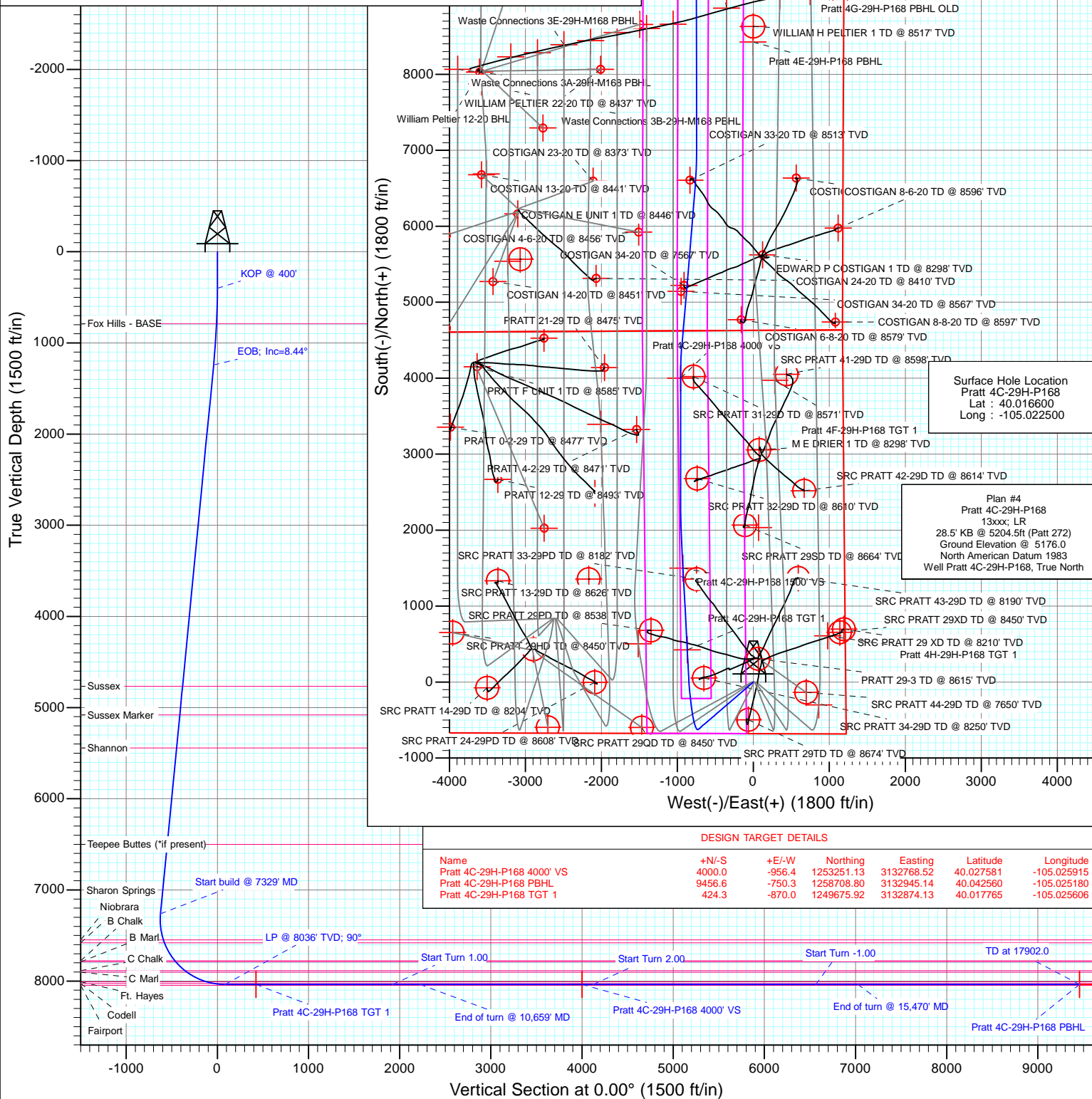


SECTION DETAILS

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	1243.8	8.44	229.30	1240.7	-40.4	-47.0	1.00	229.30	-40.4	
4	7329.8	8.44	229.30	7260.9	-622.8	-724.0	0.00	0.00	-622.8	
5	8519.1	90.00	357.00	8036.0	84.7	-852.2	8.00	127.40	84.7	
6	8859.1	90.00	357.00	8036.0	424.3	-870.0	0.00	0.00	424.3	Pratt 4C-29H-P168 TGT 1
7	10359.1	90.00	357.00	8036.0	1922.2	-948.5	0.00	0.00	1922.2	
8	10659.1	90.00	0.00	8036.0	2222.1	-956.4	1.00	90.00	2222.1	
9	12559.1	90.00	0.00	8036.0	4122.1	-956.4	0.00	0.00	4122.1	
10	12809.1	90.00	5.00	8036.0	4371.8	-945.5	2.00	90.00	4371.8	
11	15009.1	90.00	4.50	8036.0	6564.2	-763.0	0.02	-90.00	6564.2	
12	15459.1	90.00	360.00	8036.0	7013.7	-745.6	1.00	-90.00	7013.7	
13	15470.0	90.00	359.89	8036.0	7024.9	-745.6	1.00	-90.00	7024.9	
14	17902.0	90.00	359.89	8036.0	9456.6	-750.3	0.00	0.00	9456.6	Pratt 4C-29H-P168 PBHL



Azimuths to True North
Magnetic North: 8.71°
Magnetic Field
Strength: 52694.7nT
Dip Angle: 66.63°
Date: 5/23/2013
Model: IGRF2010



Cathedral Energy Services

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:	28.5' KB @ 5204.5ft (Patt 272)
Project:	DJ Wattenberg	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #4		

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:	1,249,256.34 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 #4			
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	
1,243.8	8.44	229.30	1,240.7	-40.4	-47.0	1.00	1.00	0.00	229.30	
7,329.8	8.44	229.30	7,260.9	-622.8	-724.0	0.00	0.00	0.00	0.00	
8,519.1	90.00	357.00	8,036.0	84.7	-852.2	8.00	6.86	10.74	127.40	
8,859.1	90.00	357.00	8,036.0	424.3	-870.0	0.00	0.00	0.00	0.00	Pratt 4C-29H-P168 T
10,359.1	90.00	357.00	8,036.0	1,922.2	-948.5	0.00	0.00	0.00	0.00	
10,659.1	90.00	0.00	8,036.0	2,222.1	-956.4	1.00	0.00	1.00	90.00	
12,559.1	90.00	0.00	8,036.0	4,122.1	-956.4	0.00	0.00	0.00	0.00	
12,809.1	90.00	5.00	8,036.0	4,371.8	-945.5	2.00	0.00	2.00	90.00	
15,009.1	90.00	4.50	8,036.0	6,564.2	-763.3	0.02	0.00	-0.02	-90.00	
15,459.1	90.00	360.00	8,036.0	7,013.7	-745.6	1.00	0.00	-1.00	-90.00	
15,470.3	90.00	359.89	8,036.0	7,024.9	-745.6	1.00	0.00	-1.00	-90.00	
17,902.0	90.00	359.89	8,036.0	9,456.6	-750.3	0.00	0.00	0.00	0.00	Pratt 4C-29H-P168 PI

Cathedral Energy Services

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:	28.5' KB @ 5204.5ft (Patt 272)
Project:	DJ Wattenberg	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #4		

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	229.30	500.0	-0.6	-0.7	-0.6	1.00	1.00	
600.0	2.00	229.30	600.0	-2.3	-2.6	-2.3	1.00	1.00	
700.0	3.00	229.30	699.9	-5.1	-6.0	-5.1	1.00	1.00	
789.3	3.89	229.30	789.0	-8.6	-10.0	-8.6	1.00	1.00	Fox Hills - BASE
800.0	4.00	229.30	799.7	-9.1	-10.6	-9.1	1.00	1.00	
900.0	5.00	229.30	899.4	-14.2	-16.5	-14.2	1.00	1.00	
1,000.0	6.00	229.30	998.9	-20.5	-23.8	-20.5	1.00	1.00	
1,100.0	7.00	229.30	1,098.3	-27.9	-32.4	-27.9	1.00	1.00	
1,200.0	8.00	229.30	1,197.4	-36.4	-42.3	-36.4	1.00	1.00	
1,243.8	8.44	229.30	1,240.7	-40.4	-47.0	-40.4	1.00	1.00	EOB; Inc=8.44°
1,300.0	8.44	229.30	1,296.3	-45.8	-53.3	-45.8	0.00	0.00	
1,400.0	8.44	229.30	1,395.3	-55.4	-64.4	-55.4	0.00	0.00	
1,500.0	8.44	229.30	1,494.2	-65.0	-75.5	-65.0	0.00	0.00	
1,600.0	8.44	229.30	1,593.1	-74.5	-86.6	-74.5	0.00	0.00	
1,700.0	8.44	229.30	1,692.0	-84.1	-97.8	-84.1	0.00	0.00	
1,800.0	8.44	229.30	1,790.9	-93.7	-108.9	-93.7	0.00	0.00	
1,900.0	8.44	229.30	1,889.9	-103.2	-120.0	-103.2	0.00	0.00	
2,000.0	8.44	229.30	1,988.8	-112.8	-131.1	-112.8	0.00	0.00	
2,100.0	8.44	229.30	2,087.7	-122.4	-142.3	-122.4	0.00	0.00	
2,200.0	8.44	229.30	2,186.6	-131.9	-153.4	-131.9	0.00	0.00	
2,300.0	8.44	229.30	2,285.5	-141.5	-164.5	-141.5	0.00	0.00	
2,400.0	8.44	229.30	2,384.4	-151.1	-175.6	-151.1	0.00	0.00	
2,500.0	8.44	229.30	2,483.4	-160.7	-186.8	-160.7	0.00	0.00	
2,600.0	8.44	229.30	2,582.3	-170.2	-197.9	-170.2	0.00	0.00	
2,700.0	8.44	229.30	2,681.2	-179.8	-209.0	-179.8	0.00	0.00	
2,800.0	8.44	229.30	2,780.1	-189.4	-220.1	-189.4	0.00	0.00	
2,900.0	8.44	229.30	2,879.0	-198.9	-231.3	-198.9	0.00	0.00	
3,000.0	8.44	229.30	2,977.9	-208.5	-242.4	-208.5	0.00	0.00	
3,100.0	8.44	229.30	3,076.9	-218.1	-253.5	-218.1	0.00	0.00	
3,200.0	8.44	229.30	3,175.8	-227.6	-264.6	-227.6	0.00	0.00	
3,300.0	8.44	229.30	3,274.7	-237.2	-275.7	-237.2	0.00	0.00	
3,400.0	8.44	229.30	3,373.6	-246.8	-286.9	-246.8	0.00	0.00	
3,500.0	8.44	229.30	3,472.5	-256.4	-298.0	-256.4	0.00	0.00	
3,600.0	8.44	229.30	3,571.4	-265.9	-309.1	-265.9	0.00	0.00	
3,700.0	8.44	229.30	3,670.4	-275.5	-320.2	-275.5	0.00	0.00	
3,800.0	8.44	229.30	3,769.3	-285.1	-331.4	-285.1	0.00	0.00	
3,900.0	8.44	229.30	3,868.2	-294.6	-342.5	-294.6	0.00	0.00	
4,000.0	8.44	229.30	3,967.1	-304.2	-353.6	-304.2	0.00	0.00	
4,100.0	8.44	229.30	4,066.0	-313.8	-364.7	-313.8	0.00	0.00	
4,200.0	8.44	229.30	4,165.0	-323.3	-375.9	-323.3	0.00	0.00	
4,300.0	8.44	229.30	4,263.9	-332.9	-387.0	-332.9	0.00	0.00	
4,400.0	8.44	229.30	4,362.8	-342.5	-398.1	-342.5	0.00	0.00	
4,500.0	8.44	229.30	4,461.7	-352.0	-409.2	-352.0	0.00	0.00	
4,600.0	8.44	229.30	4,560.6	-361.6	-420.4	-361.6	0.00	0.00	
4,700.0	8.44	229.30	4,659.5	-371.2	-431.5	-371.2	0.00	0.00	
4,800.0	8.44	229.30	4,758.5	-380.8	-442.6	-380.8	0.00	0.00	
4,807.6	8.44	229.30	4,766.0	-381.5	-443.5	-381.5	0.00	0.00	Sussex

Cathedral Energy Services

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:	28.5' KB @ 5204.5ft (Patt 272)
Project:	DJ Wattenberg	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #4		

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	8.44	229.30	4,857.4	-390.3	-453.7	-390.3	0.00	0.00	
5,000.0	8.44	229.30	4,956.3	-399.9	-464.9	-399.9	0.00	0.00	
5,100.0	8.44	229.30	5,055.2	-409.5	-476.0	-409.5	0.00	0.00	
5,124.0	8.44	229.30	5,079.0	-411.8	-478.7	-411.8	0.00	0.00	Sussex Marker
5,200.0	8.44	229.30	5,154.1	-419.0	-487.1	-419.0	0.00	0.00	
5,300.0	8.44	229.30	5,253.0	-428.6	-498.2	-428.6	0.00	0.00	
5,400.0	8.44	229.30	5,352.0	-438.2	-509.4	-438.2	0.00	0.00	
5,492.0	8.44	229.30	5,443.0	-447.0	-519.6	-447.0	0.00	0.00	Shannon
5,500.0	8.44	229.30	5,450.9	-447.7	-520.5	-447.7	0.00	0.00	
5,600.0	8.44	229.30	5,549.8	-457.3	-531.6	-457.3	0.00	0.00	
5,700.0	8.44	229.30	5,648.7	-466.9	-542.7	-466.9	0.00	0.00	
5,800.0	8.44	229.30	5,747.6	-476.4	-553.9	-476.4	0.00	0.00	
5,900.0	8.44	229.30	5,846.6	-486.0	-565.0	-486.0	0.00	0.00	
6,000.0	8.44	229.30	5,945.5	-495.6	-576.1	-495.6	0.00	0.00	
6,100.0	8.44	229.30	6,044.4	-505.2	-587.2	-505.2	0.00	0.00	
6,200.0	8.44	229.30	6,143.3	-514.7	-598.3	-514.7	0.00	0.00	
6,300.0	8.44	229.30	6,242.2	-524.3	-609.5	-524.3	0.00	0.00	
6,400.0	8.44	229.30	6,341.1	-533.9	-620.6	-533.9	0.00	0.00	
6,500.0	8.44	229.30	6,440.1	-543.4	-631.7	-543.4	0.00	0.00	
6,560.6	8.44	229.30	6,500.0	-549.2	-638.5	-549.2	0.00	0.00	Teepee Buttes (*if present)
6,600.0	8.44	229.30	6,539.0	-553.0	-642.8	-553.0	0.00	0.00	
6,700.0	8.44	229.30	6,637.9	-562.6	-654.0	-562.6	0.00	0.00	
6,800.0	8.44	229.30	6,736.8	-572.1	-665.1	-572.1	0.00	0.00	
6,900.0	8.44	229.30	6,835.7	-581.7	-676.2	-581.7	0.00	0.00	
7,000.0	8.44	229.30	6,934.6	-591.3	-687.3	-591.3	0.00	0.00	
7,100.0	8.44	229.30	7,033.6	-600.8	-698.5	-600.8	0.00	0.00	
7,200.0	8.44	229.30	7,132.5	-610.4	-709.6	-610.4	0.00	0.00	
7,300.0	8.44	229.30	7,231.4	-620.0	-720.7	-620.0	0.00	0.00	
7,329.8	8.44	229.30	7,260.9	-622.8	-724.0	-622.8	0.00	0.00	Start build @ 7329' MD
7,400.0	6.71	271.02	7,330.5	-626.1	-732.0	-626.1	8.00	-2.46	
7,500.0	10.78	318.95	7,429.4	-619.0	-744.0	-619.0	8.00	4.07	
7,600.0	17.74	335.48	7,526.3	-598.0	-756.5	-598.0	8.00	6.96	
7,621.8	19.36	337.49	7,547.0	-591.6	-759.3	-591.6	8.00	7.44	Sharon Springs
7,657.1	22.03	340.14	7,580.0	-580.0	-763.8	-580.0	8.00	7.55	Niobrara
7,700.0	25.31	342.63	7,619.3	-563.7	-769.3	-563.7	8.00	7.65	
7,800.0	33.08	346.62	7,706.6	-516.7	-782.0	-516.7	8.00	7.76	
7,886.4	39.85	348.92	7,776.0	-466.5	-792.8	-466.5	8.00	7.84	B Chalk
7,900.0	40.93	349.22	7,786.4	-457.8	-794.4	-457.8	8.00	7.87	
7,902.2	41.10	349.27	7,788.0	-456.4	-794.7	-456.4	8.00	7.87	B Marl
8,000.0	48.81	351.11	7,857.2	-388.4	-806.4	-388.4	8.00	7.89	
8,042.2	52.15	351.77	7,884.0	-356.2	-811.2	-356.2	8.00	7.91	C Chalk
8,072.3	54.53	352.20	7,902.0	-332.3	-814.6	-332.3	8.00	7.92	C Marl
8,100.0	56.73	352.58	7,917.6	-309.6	-817.6	-309.6	8.00	7.92	
8,200.0	64.66	353.81	7,966.5	-223.1	-827.9	-223.1	8.00	7.93	
8,300.0	72.59	354.89	8,003.0	-130.5	-837.0	-130.5	8.00	7.94	
8,313.9	73.70	355.03	8,007.0	-117.2	-838.2	-117.2	8.00	7.94	Ft. Hayes
8,398.9	80.45	355.87	8,026.0	-34.7	-844.8	-34.7	8.00	7.94	Codell
8,400.0	80.53	355.88	8,026.2	-33.6	-844.8	-33.6	8.00	7.94	
8,500.0	88.48	356.82	8,035.7	65.6	-851.2	65.6	8.00	7.94	
8,519.1	90.00	357.00	8,036.0	84.7	-852.2	84.7	8.00	7.95	LP @ 8036' TVD; 90°
8,600.0	90.00	357.00	8,036.0	165.5	-856.4	165.5	0.00	0.00	
8,700.0	90.00	357.00	8,036.0	265.4	-861.7	265.4	0.00	0.00	

Cathedral Energy Services

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:	28.5' KB @ 5204.5ft (Patt 272)
Project:	DJ Wattenberg	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #4		

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	365.2	-866.9	365.2	0.00	0.00	
8,859.1	90.00	357.00	8,036.0	424.3	-870.0	424.3	0.00	0.00	Pratt 4C-29H-P168 TGT 1
8,900.0	90.00	357.00	8,036.0	465.1	-872.1	465.1	0.00	0.00	
9,000.0	90.00	357.00	8,036.0	564.9	-877.4	564.9	0.00	0.00	
9,100.0	90.00	357.00	8,036.0	664.8	-882.6	664.8	0.00	0.00	
9,200.0	90.00	357.00	8,036.0	764.7	-887.8	764.7	0.00	0.00	
9,300.0	90.00	357.00	8,036.0	864.5	-893.1	864.5	0.00	0.00	
9,400.0	90.00	357.00	8,036.0	964.4	-898.3	964.4	0.00	0.00	
9,500.0	90.00	357.00	8,036.0	1,064.3	-903.5	1,064.3	0.00	0.00	
9,600.0	90.00	357.00	8,036.0	1,164.1	-908.8	1,164.1	0.00	0.00	
9,700.0	90.00	357.00	8,036.0	1,264.0	-914.0	1,264.0	0.00	0.00	
9,800.0	90.00	357.00	8,036.0	1,363.8	-919.2	1,363.8	0.00	0.00	
9,900.0	90.00	357.00	8,036.0	1,463.7	-924.5	1,463.7	0.00	0.00	
9,936.4	90.00	357.00	8,036.0	1,500.0	-926.4	1,500.0	0.00	0.00	Pratt 4C-29H-P168 1500' VS
10,000.0	90.00	357.00	8,036.0	1,563.6	-929.7	1,563.6	0.00	0.00	
10,100.0	90.00	357.00	8,036.0	1,663.4	-934.9	1,663.4	0.00	0.00	
10,200.0	90.00	357.00	8,036.0	1,763.3	-940.2	1,763.3	0.00	0.00	
10,300.0	90.00	357.00	8,036.0	1,863.2	-945.4	1,863.2	0.00	0.00	
10,359.1	90.00	357.00	8,036.0	1,922.2	-948.5	1,922.2	0.00	0.00	Start Turn 1.00
10,400.0	90.00	357.41	8,036.0	1,963.0	-950.5	1,963.0	1.00	0.00	
10,500.0	90.00	358.41	8,036.0	2,063.0	-954.1	2,063.0	1.00	0.00	
10,600.0	90.00	359.41	8,036.0	2,162.9	-956.1	2,162.9	1.00	0.00	
10,659.1	90.00	360.00	8,036.0	2,222.0	-956.4	2,222.0	1.00	0.00	End of turn @ 10,659' MD
10,700.0	90.00	0.00	8,036.0	2,262.9	-956.4	2,262.9	0.00	0.00	
10,800.0	90.00	0.00	8,036.0	2,362.9	-956.4	2,362.9	0.00	0.00	
10,900.0	90.00	0.00	8,036.0	2,462.9	-956.4	2,462.9	0.00	0.00	
11,000.0	90.00	0.00	8,036.0	2,562.9	-956.4	2,562.9	0.00	0.00	
11,100.0	90.00	0.00	8,036.0	2,662.9	-956.4	2,662.9	0.00	0.00	
11,200.0	90.00	0.00	8,036.0	2,762.9	-956.4	2,762.9	0.00	0.00	
11,300.0	90.00	0.00	8,036.0	2,862.9	-956.4	2,862.9	0.00	0.00	
11,400.0	90.00	0.00	8,036.0	2,962.9	-956.4	2,962.9	0.00	0.00	
11,500.0	90.00	0.00	8,036.0	3,062.9	-956.4	3,062.9	0.00	0.00	
11,600.0	90.00	0.00	8,036.0	3,162.9	-956.4	3,162.9	0.00	0.00	
11,700.0	90.00	0.00	8,036.0	3,262.9	-956.4	3,262.9	0.00	0.00	
11,800.0	90.00	0.00	8,036.0	3,362.9	-956.4	3,362.9	0.00	0.00	
11,900.0	90.00	0.00	8,036.0	3,462.9	-956.4	3,462.9	0.00	0.00	
12,000.0	90.00	0.00	8,036.0	3,562.9	-956.4	3,562.9	0.00	0.00	
12,100.0	90.00	0.00	8,036.0	3,662.9	-956.4	3,662.9	0.00	0.00	
12,200.0	90.00	0.00	8,036.0	3,762.9	-956.4	3,762.9	0.00	0.00	
12,300.0	90.00	0.00	8,036.0	3,862.9	-956.4	3,862.9	0.00	0.00	
12,400.0	90.00	0.00	8,036.0	3,962.9	-956.4	3,962.9	0.00	0.00	
12,437.1	90.00	0.00	8,036.0	4,000.0	-956.4	4,000.0	0.00	0.00	Pratt 4C-29H-P168 4000' VS
12,500.0	90.00	0.00	8,036.0	4,062.9	-956.4	4,062.9	0.00	0.00	
12,559.1	90.00	0.00	8,036.0	4,122.0	-956.4	4,122.0	0.00	0.00	Start Turn 2.00
12,600.0	90.00	0.82	8,036.0	4,162.9	-956.1	4,162.9	2.00	0.00	
12,700.0	90.00	2.82	8,036.0	4,262.9	-952.9	4,262.9	2.00	0.00	
12,800.0	90.00	4.82	8,036.0	4,362.7	-946.2	4,362.7	2.00	0.00	
12,809.1	90.00	5.00	8,036.0	4,371.8	-945.5	4,371.8	2.00	0.00	
12,900.0	90.00	4.98	8,036.0	4,462.3	-937.6	4,462.3	0.02	0.00	
13,000.0	90.00	4.96	8,036.0	4,561.9	-928.9	4,561.9	0.02	0.00	
13,100.0	90.00	4.93	8,036.0	4,661.5	-920.3	4,661.5	0.02	0.00	
13,200.0	90.00	4.91	8,036.0	4,761.2	-911.7	4,761.2	0.02	0.00	

Cathedral Energy Services

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:	28.5' KB @ 5204.5ft (Patt 272)
Project:	DJ Wattenberg	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #4		

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
13,300.0	90.00	4.89	8,036.0	4,860.8	-903.1	4,860.8	0.02	0.00	
13,400.0	90.00	4.87	8,036.0	4,960.4	-894.6	4,960.4	0.02	0.00	
13,500.0	90.00	4.84	8,036.0	5,060.1	-886.2	5,060.1	0.02	0.00	
13,600.0	90.00	4.82	8,036.0	5,159.7	-877.8	5,159.7	0.02	0.00	
13,700.0	90.00	4.80	8,036.0	5,259.4	-869.4	5,259.4	0.02	0.00	
13,800.0	90.00	4.77	8,036.0	5,359.0	-861.0	5,359.0	0.02	0.00	
13,900.0	90.00	4.75	8,036.0	5,458.7	-852.7	5,458.7	0.02	0.00	
14,000.0	90.00	4.73	8,036.0	5,558.3	-844.5	5,558.3	0.02	0.00	
14,100.0	90.00	4.71	8,036.0	5,658.0	-836.2	5,658.0	0.02	0.00	
14,200.0	90.00	4.68	8,036.0	5,757.7	-828.1	5,757.7	0.02	0.00	
14,300.0	90.00	4.66	8,036.0	5,857.3	-819.9	5,857.3	0.02	0.00	
14,400.0	90.00	4.64	8,036.0	5,957.0	-811.8	5,957.0	0.02	0.00	
14,500.0	90.00	4.62	8,036.0	6,056.7	-803.7	6,056.7	0.02	0.00	
14,600.0	90.00	4.59	8,036.0	6,156.3	-795.7	6,156.3	0.02	0.00	
14,700.0	90.00	4.57	8,036.0	6,256.0	-787.7	6,256.0	0.02	0.00	
14,800.0	90.00	4.55	8,036.0	6,355.7	-779.8	6,355.7	0.02	0.00	
14,900.0	90.00	4.52	8,036.0	6,455.4	-771.9	6,455.4	0.02	0.00	
15,000.0	90.00	4.50	8,036.0	6,555.1	-764.0	6,555.1	0.02	0.00	
15,009.1	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	3.59	8,036.0	6,654.8	-756.9	6,654.8	1.00	0.00	
15,200.0	90.00	2.59	8,036.0	6,754.7	-751.5	6,754.7	1.00	0.00	
15,300.0	90.00	1.59	8,036.0	6,854.6	-747.8	6,854.6	1.00	0.00	
15,400.0	90.00	0.59	8,036.0	6,954.6	-745.9	6,954.6	1.00	0.00	
15,459.1	90.00	360.00	8,036.0	7,013.7	-745.6	7,013.7	1.00	0.00	
15,470.3	90.00	359.89	8,036.0	7,024.9	-745.6	7,024.9	1.00	0.00	End of turn @ 15,470' MD
15,500.0	90.00	359.89	8,036.0	7,054.6	-745.7	7,054.6	0.00	0.00	
15,600.0	90.00	359.89	8,036.0	7,154.6	-745.9	7,154.6	0.00	0.00	
15,700.0	90.00	359.89	8,036.0	7,254.6	-746.1	7,254.6	0.00	0.00	
15,800.0	90.00	359.89	8,036.0	7,354.6	-746.3	7,354.6	0.00	0.00	
15,900.0	90.00	359.89	8,036.0	7,454.6	-746.5	7,454.6	0.00	0.00	
16,000.0	90.00	359.89	8,036.0	7,554.6	-746.7	7,554.6	0.00	0.00	
16,100.0	90.00	359.89	8,036.0	7,654.6	-746.8	7,654.6	0.00	0.00	
16,200.0	90.00	359.89	8,036.0	7,754.6	-747.0	7,754.6	0.00	0.00	
16,300.0	90.00	359.89	8,036.0	7,854.6	-747.2	7,854.6	0.00	0.00	
16,400.0	90.00	359.89	8,036.0	7,954.6	-747.4	7,954.6	0.00	0.00	
16,500.0	90.00	359.89	8,036.0	8,054.6	-747.6	8,054.6	0.00	0.00	
16,600.0	90.00	359.89	8,036.0	8,154.6	-747.8	8,154.6	0.00	0.00	
16,700.0	90.00	359.89	8,036.0	8,254.6	-748.0	8,254.6	0.00	0.00	
16,800.0	90.00	359.89	8,036.0	8,354.6	-748.2	8,354.6	0.00	0.00	
16,900.0	90.00	359.89	8,036.0	8,454.6	-748.4	8,454.6	0.00	0.00	
17,000.0	90.00	359.89	8,036.0	8,554.6	-748.6	8,554.6	0.00	0.00	
17,100.0	90.00	359.89	8,036.0	8,654.6	-748.8	8,654.6	0.00	0.00	
17,200.0	90.00	359.89	8,036.0	8,754.6	-749.0	8,754.6	0.00	0.00	
17,300.0	90.00	359.89	8,036.0	8,854.6	-749.2	8,854.6	0.00	0.00	
17,400.0	90.00	359.89	8,036.0	8,954.6	-749.4	8,954.6	0.00	0.00	
17,500.0	90.00	359.89	8,036.0	9,054.6	-749.6	9,054.6	0.00	0.00	
17,600.0	90.00	359.89	8,036.0	9,154.6	-749.8	9,154.6	0.00	0.00	
17,700.0	90.00	359.89	8,036.0	9,254.6	-750.0	9,254.6	0.00	0.00	
17,800.0	90.00	359.89	8,036.0	9,354.6	-750.1	9,354.6	0.00	0.00	
17,900.0	90.00	359.89	8,036.0	9,454.6	-750.3	9,454.6	0.00	0.00	
17,902.0	90.00	359.89	8,036.0	9,456.6	-750.3	9,456.6	0.00	0.00	TD at 17902.0 - Pratt 4C-29H-P168 PBHL

Cathedral Energy Services

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:	28.5' KB @ 5204.5ft (Patt 272)
Project:	DJ Wattenberg	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Pratt 4C-29H-P168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #4		

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 150C - plan hits target center - Point	0.00	0.00	8,036.0	1,500.0	-926.4	1,250,751.34	3,132,811.96	40.020718	-105.025808
Pratt 4C-29H-P168 PBH - plan hits target center - Point	0.00	0.00	8,036.0	9,456.6	-750.3	1,258,708.80	3,132,945.14	40.042560	-105.025180
Pratt 4C-29H-P168 TGT - plan hits target center - Point	0.00	0.00	8,036.0	424.3	-870.0	1,249,675.92	3,132,874.13	40.017765	-105.025606
Pratt 4C-29H-P168 400C - plan hits target center - Point	0.00	0.00	8,036.0	4,000.0	-956.4	1,253,251.13	3,132,768.52	40.027581	-105.025915

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
789.3	789.0	Fox Hills - BASE				
4,807.6	4,766.0	Sussex				
5,124.0	5,079.0	Sussex Marker				
5,492.0	5,443.0	Shannon				
6,560.6	6,500.0	Teepee Buttes (*if present)				
7,621.8	7,547.0	Sharon Springs				
7,657.1	7,580.0	Niobrara				
7,886.4	7,776.0	B Chalk				
7,902.2	7,788.0	B Marl				
8,042.2	7,884.0	C Chalk				
8,072.3	7,902.0	C Marl				
8,313.9	8,007.0	Ft. Hayes				
8,398.9	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'
1,243.8	1,240.7	-40.4	-47.0	EOB; Inc=8.44°
7,329.8	7,260.9	-622.8	-724.0	Start build @ 7329' MD
8,519.1	8,036.0	84.7	-852.2	LP @ 8036' TVD; 90°
10,359.1	8,036.0	424.3	-870.0	Start Turn 1.00
10,659.1	8,036.0	1,922.2	-948.5	End of turn @ 10,659' MD
12,559.1	8,036.0	2,222.1	-956.4	Start Turn 2.00
15,009.1	8,036.0	4,122.1	-956.4	Start Turn -1.00
15,470.3	8,036.0	4,371.8	-945.5	End of turn @ 15,470' MD
17,902.0	8,036.0	6,564.2	-763.3	TD at 17902.0

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S29-T1N-R68W (Pratt/Waste Connections)

Pratt 4C-29H-P168

Hz

Plan #4

Anticollision Report

24 November, 2014

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Reference	Plan #4		
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 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	11/24/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	17,902.0	Plan #4 (Hz)	MWD	Geolink MWD	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S29-T1N-R68W (Pratt/Waste Connections)						
COSTIGAN 0-6-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 0-8-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 13-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 14-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 23-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 24-20 (EXISTING) - ENCANA WELL - ENCA						Out of range
COSTIGAN 33-20 (EXISTING) - ENCANA WELL - ENCA	15,052.8	8,247.3	70.6	-69.2	0.505	Level 1, CC, ES, SF
COSTIGAN 34-20 (EXISTING) - ENCANA WELL - SURV	13,658.9	7,705.0	477.6	446.6	15.411	CC, ES, SF
COSTIGAN 43-20 (EXISTING) - ENCANA WELL - SURV						Out of range
COSTIGAN 4-6-20 (EXISTING) - ENCANA WELL - PLAN	14,309.7	8,138.9	692.5	573.7	5.828	CC, ES
COSTIGAN 4-6-20 (EXISTING) - ENCANA WELL - PLAN	14,400.0	8,138.9	698.3	577.9	5.800	SF
COSTIGAN 6-8-20 (EXISTING) - ENCANA WELL - SUR	13,259.1	8,130.0	742.2	635.7	6.971	CC, ES
COSTIGAN 6-8-20 (EXISTING) - ENCANA WELL - SUR	13,300.0	8,131.2	743.3	636.1	6.935	SF
COSTIGAN 8-6-20 (EXISTING) - ENCANA WELL - SUR						Out of range
COSTIGAN 8-8-20 (EXISTING) - ENCANA WELL - SUR						Out of range
COSTIGAN E UNIT 1 (EXISTING) - ENCANA WELL - NO						Out of range
COSTIGAN H UNIT 1 (EXISTING) - VESSELS WELL - N						Out of range
EDWARD P COSTIGAN 1 (EXISTING) - ENCANA WELL	14,143.3	8,049.0	957.6	842.0	8.289	CC, ES
EDWARD P COSTIGAN 1 (EXISTING) - ENCANA WELL	14,300.0	8,049.6	970.3	852.1	8.205	SF
M E DRIER 1 (EXISTING) - SYNERGY WELL - GYRO						Out of range
PRATT 0-2-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
PRATT 1 (EXISTING) - SYNERGY WELL - NO SURVEY						Out of range
PRATT 12-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 2 (EXISTING) - SYNERGY WELL - NO SURVEY						Out of range
PRATT 2-0-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
PRATT 21-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 22-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 2-4-29 (EXISTING) - ENCANA WELL - PLAN ON						Out of range
PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURV	400.0	372.5	312.7	311.4	240.788	CC, ES
PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURV	9,000.0	8,008.5	976.7	943.6	29.493	SF
PRATT 4-2-29 (EXISTING) - ENCANA WELL - SURVEY	11,750.4	8,499.3	576.9	492.9	6.862	CC, ES
PRATT 4-2-29 (EXISTING) - ENCANA WELL - SURVEY	11,800.0	8,500.3	579.1	494.1	6.819	SF
Pratt 4A-29H-P168 (DROP) - Hz - Plan #1	200.0	184.5	19.6	19.0	32.750	CC, ES
Pratt 4A-29H-P168 (DROP) - Hz - Plan #1	17,100.0	17,225.4	658.9	350.8	2.139	SF
Pratt 4B-29H-P168 - Hz - Plan #1	300.0	284.5	8.4	7.5	8.866	CC, ES
Pratt 4B-29H-P168 - Hz - Plan #1	17,104.9	16,768.2	524.5	337.9	2.810	SF
Pratt 4D-29H-P168 - Hz - Plan #2	400.0	400.0	11.2	9.9	8.639	CC, ES
Pratt 4D-29H-P168 - Hz - Plan #2	17,300.0	16,815.2	593.0	377.8	2.756	SF
Pratt 4E-29H-P168 - Hz - Plan #3	400.0	400.0	19.6	18.3	15.119	CC, ES
Pratt 4E-29H-P168 - Hz - Plan #3	16,900.0	16,837.1	743.4	442.0	2.467	SF
Pratt 4F-29H-P168 - Hz - Plan #2	400.0	400.0	30.8	29.5	23.758	CC, ES
Pratt 4F-29H-P168 - Hz - Plan #2	700.0	699.2	38.7	36.3	16.470	SF
Pratt 4G-29H-P168 - Hz - Plan #3	400.0	400.0	39.2	37.9	30.238	CC, ES
Pratt 4G-29H-P168 - Hz - Plan #3	600.0	597.6	47.1	45.1	23.582	SF
PRATT F UNIT 1 (EXISTING) - ENCANA WELL - NO SU						Out of range
SRC PRATT 13-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 14-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 24-29 PD (EXISTING) - SYNERGY WELL -						Out of range
SRC PRATT 29HD (EXISTING) - SYNERGY WELL - PL						Out of range
SRC PRATT 29LD (EXISTING) - SYNERGY WELL - PLA						Out of range
SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SU	665.0	665.3	310.6	308.1	121.551	CC, ES
SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SU	9,200.0	8,244.7	485.1	447.4	12.884	SF
SRC PRATT 29QD (EXISTING) - SYNERGY WELL - PL	7,886.7	8,002.8	688.3	646.8	16.584	CC, ES

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S29-T1N-R68W (Pratt/Waste Connections)						
SRC PRATT 29QD (EXISTING) - SYNERGY WELL - PL	7,900.0	8,013.0	688.4	646.8	16.571	SF
SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SU	10,461.2	8,149.5	832.7	770.9	13.480	CC, ES
SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SU	10,659.1	8,153.3	852.5	787.9	13.190	SF
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	2,762.5	2,812.4	276.2	263.7	22.097	CC
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	3,000.0	3,051.7	277.3	262.7	19.023	ES
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	4,200.0	4,232.8	348.4	323.1	13.729	SF
SRC PRATT 29XD (EXISTING) - SYNERGY WELL - GY	100.0	73.5	297.1	296.8	1,171.135	CC
SRC PRATT 32-29D (EXISTING) - SYNERGY WELL - GY	200.0	174.1	297.4	296.8	492.322	ES
SRC PRATT 29XD (EXISTING) - SYNERGY WELL - GY	2,200.0	2,009.2	853.8	845.9	107.347	SF
SRC PRATT 31-29D (EXISTING) - SYNERGY WELL - S	12,456.5	8,244.4	166.2	69.1	1.711	CC, ES, SF
SRC PRATT 32-29D (EXISTING) - SYNERGY WELL - S	11,096.3	8,162.4	201.5	135.9	3.070	CC
SRC PRATT 32-29D (EXISTING) - SYNERGY WELL - S	11,100.0	8,162.6	201.5	135.8	3.068	ES, SF
SRC PRATT 33-29PD (EXISTING) - SYNERGY WELL -	9,777.8	8,187.5	168.8	115.5	3.167	CC, ES, SF
SRC PRATT 34-29D (EXISTING) - SYNERGY WELL - S	8,473.2	8,096.3	192.6	163.1	6.537	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	100.0	88.2	314.6	314.3	1,165.221	CC
SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - S	200.0	187.9	314.7	314.1	517.140	ES
SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - S	2,300.0	2,075.3	942.4	934.6	121.030	SF
SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - P	400.0	376.5	293.3	292.0	224.635	CC, ES
SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - P	4,100.0	3,972.4	977.5	959.6	54.622	SF
Waste Connections 3A-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3B-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3C-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3D-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3E-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3F-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3G-29H-M168 - Hz - Plan #1	12,559.4	11,729.7	859.0	725.6	6.440	CC
Waste Connections 3G-29H-M168 - Hz - Plan #1	12,700.0	11,870.2	862.4	724.6	6.257	ES
Waste Connections 3G-29H-M168 - Hz - Plan #1	14,300.0	13,464.6	992.2	799.8	5.158	SF
WILLIAM H PELTIER 1 (EXISTING) - VESSELS WELL -	17,072.6	8,017.5	747.1	579.1	4.447	CC, ES
WILLIAM H PELTIER 1 (EXISTING) - VESSELS WELL -	17,100.0	8,017.5	747.6	579.1	4.438	SF
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	17,000.0	9,521.0	339.0	282.4	5.996	SF
WILLIAM PELTIER 1A-20H (EXISTING) - ENCANA WEL	17,187.0	9,472.6	287.0	244.3	6.722	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	17,102.1	8,328.0	746.4	573.6	4.321	CC, ES
WILLIAM PELTIER 4-2-20 (EXISTING) - ENCANA WELL	17,200.0	8,328.0	752.8	578.3	4.315	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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							
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	
14,100.0	8,036.0	8,260.2	8,062.9	103.2	28.7	-99.68	6,612.6	-830.6	954.7	833.6	121.05	7.887		
14,200.0	8,036.0	8,258.9	8,061.5	104.9	28.7	-98.67	6,612.6	-830.6	855.0	731.9	123.12	6.944		
14,300.0	8,036.0	8,257.5	8,060.2	106.6	28.7	-97.65	6,612.6	-830.6	755.4	630.2	125.17	6.035		
14,400.0	8,036.0	8,256.2	8,058.8	108.3	28.7	-96.61	6,612.6	-830.5	655.9	528.7	127.20	5.157		
14,500.0	8,036.0	8,254.8	8,057.5	110.1	28.7	-95.56	6,612.6	-830.5	556.7	427.5	129.20	4.309		
14,600.0	8,036.0	8,253.4	8,056.1	111.8	28.7	-94.49	6,612.7	-830.5	457.7	326.5	131.17	3.489		
14,700.0	8,036.0	8,252.1	8,054.7	113.5	28.7	-93.41	6,612.7	-830.5	359.2	226.1	133.10	2.699		
14,800.0	8,036.0	8,250.7	8,053.4	115.2	28.7	-92.32	6,612.7	-830.5	261.9	127.0	134.99	1.941		
14,900.0	8,036.0	8,249.4	8,052.0	116.9	28.7	-91.22	6,612.7	-830.5	167.9	31.0	136.84	1.227	Level 2	
15,009.1	8,036.0	8,247.9	8,050.5	118.8	28.7	-90.02	6,612.7	-830.5	82.9	-55.9	138.81	0.597	Level 1	
15,052.8	8,036.0	8,247.3	8,049.9	119.5	28.7	-89.54	6,612.7	-830.5	70.6	-69.2	139.84	0.505	Level 1, CC, ES, SF	
15,100.0	8,036.0	8,246.6	8,049.3	120.3	28.7	-89.03	6,612.7	-830.5	84.8	-56.2	140.94	0.602	Level 1	
15,200.0	8,036.0	8,245.3	8,048.0	122.0	28.7	-87.99	6,612.8	-830.4	162.4	19.2	143.21	1.134	Level 2	
15,300.0	8,036.0	8,244.0	8,046.6	123.8	28.7	-87.08	6,612.8	-830.4	255.6	110.2	145.40	1.758		
15,400.0	8,036.0	8,242.7	8,045.3	125.5	28.7	-86.34	6,612.8	-830.4	352.1	204.6	147.54	2.387		
15,459.1	8,036.0	8,241.9	8,044.6	126.5	28.7	-85.99	6,612.8	-830.4	409.8	261.1	148.79	2.754		
15,470.3	8,036.0	8,241.8	8,044.4	126.7	28.7	-85.93	6,612.8	-830.4	420.7	271.7	149.03	2.823		
15,500.0	8,036.0	8,241.4	8,044.0	127.2	28.7	-85.68	6,612.8	-830.4	449.9	300.4	149.50	3.009		
15,600.0	8,036.0	8,240.1	8,042.7	129.0	28.7	-84.82	6,612.8	-830.4	548.4	397.3	151.07	3.630		
15,700.0	8,036.0	8,238.8	8,041.4	130.7	28.7	-83.96	6,612.8	-830.4	647.3	494.7	152.60	4.242		
15,800.0	8,036.0	8,237.5	8,040.2	132.4	28.7	-83.11	6,612.9	-830.4	746.6	592.5	154.10	4.845		
15,900.0	8,036.0	8,236.2	8,038.9	134.2	28.7	-82.26	6,612.9	-830.4	846.0	690.4	155.56	5.438		
16,000.0	8,036.0	8,234.9	8,037.6	135.9	28.7	-81.41	6,612.9	-830.4	945.5	788.5	156.98	6.023		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 34-20 (EXISTING) - ENCANA WELL - SURVE													Offset Site Error:	0.0 ft
Survey Program: 78-Geolink 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		
12,809.1	8,036.0	7,705.0	7,567.5	81.6	23.5	-4.84	5,221.7	-911.5	974.7	945.8	28.96	33.656		
12,900.0	8,036.0	7,705.0	7,567.5	83.1	23.5	-4.80	5,221.7	-911.5	896.6	867.4	29.17	30.736		
13,000.0	8,036.0	7,705.0	7,567.5	84.7	23.5	-4.77	5,221.7	-911.5	813.7	784.3	29.41	27.673		
13,100.0	8,036.0	7,705.0	7,567.5	86.4	23.5	-4.74	5,221.7	-911.5	735.1	705.5	29.64	24.801		
13,200.0	8,036.0	7,705.0	7,567.5	88.1	23.5	-4.72	5,221.7	-911.5	662.3	632.4	29.88	22.167		
13,300.0	8,036.0	7,705.0	7,567.5	89.8	23.5	-4.70	5,221.7	-911.5	597.4	567.3	30.12	19.836		
13,400.0	8,036.0	7,705.0	7,567.5	91.4	23.5	-4.68	5,221.7	-911.5	543.2	512.9	30.36	17.895		
13,500.0	8,036.0	7,705.0	7,567.5	93.1	23.5	-4.67	5,221.7	-911.5	503.3	472.7	30.60	16.449		
13,600.0	8,036.0	7,705.0	7,567.5	94.8	23.5	-4.67	5,221.7	-911.5	481.2	450.3	30.84	15.601		
13,658.9	8,036.0	7,705.0	7,567.5	95.8	23.5	-4.67	5,221.7	-911.5	477.6	446.6	30.99	15.411	CC, ES, SF	
13,700.0	8,036.0	7,705.0	7,567.5	96.5	23.5	-4.67	5,221.7	-911.5	479.3	448.2	31.09	15.417		
13,800.0	8,036.0	7,705.0	7,567.5	98.2	23.5	-4.67	5,221.7	-911.5	498.0	466.6	31.34	15.888		
13,900.0	8,036.0	7,705.0	7,567.5	99.9	23.5	-4.68	5,221.7	-911.5	535.0	503.4	31.59	16.932		
14,000.0	8,036.0	7,705.0	7,567.5	101.6	23.5	-4.69	5,221.7	-911.5	586.8	555.0	31.85	18.425		
14,100.0	8,036.0	7,705.0	7,567.5	103.2	23.5	-4.71	5,221.7	-911.5	650.1	618.0	32.11	20.244		
14,200.0	8,036.0	7,705.0	7,567.5	104.9	23.5	-4.74	5,221.7	-911.5	721.7	689.3	32.37	22.291		
14,300.0	8,036.0	7,705.0	7,567.5	106.6	23.5	-4.76	5,221.7	-911.5	799.4	766.7	32.64	24.489		
14,400.0	8,036.0	7,705.0	7,567.5	108.3	23.5	-4.80	5,221.7	-911.5	881.6	848.7	32.91	26.785		
14,500.0	8,036.0	7,705.0	7,567.5	110.1	23.5	-4.83	5,221.7	-911.5	967.2	934.0	33.19	29.140		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 4-6-20 (EXISTING) - ENCANA WELL - PLAN													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
13,600.0	8,036.0	8,138.9	7,918.5	94.8	32.2	-90.00	5,923.2	-1,509.3	990.9	884.5	106.40	9.313		
13,700.0	8,036.0	8,138.9	7,918.5	96.5	32.2	-90.00	5,923.2	-1,509.3	922.1	813.9	108.14	8.526		
13,800.0	8,036.0	8,138.9	7,918.5	98.2	32.2	-90.00	5,923.2	-1,509.3	859.4	749.5	109.89	7.820		
13,900.0	8,036.0	8,138.9	7,918.5	99.9	32.2	-90.00	5,923.2	-1,509.3	804.3	692.7	111.64	7.204		
14,000.0	8,036.0	8,138.9	7,918.5	101.6	32.2	-90.00	5,923.2	-1,509.3	758.4	645.0	113.39	6.688		
14,100.0	8,036.0	8,138.9	7,918.5	103.2	32.2	-90.00	5,923.2	-1,509.3	723.4	608.3	115.14	6.283		
14,200.0	8,036.0	8,138.9	7,918.5	104.9	32.2	-90.00	5,923.2	-1,509.3	701.1	584.2	116.89	5.998		
14,300.0	8,036.0	8,138.9	7,918.5	106.6	32.2	-90.00	5,923.2	-1,509.3	692.5	573.9	118.65	5.837		
14,309.7	8,036.0	8,138.9	7,918.5	106.8	32.2	-90.00	5,923.2	-1,509.3	692.5	573.7	118.82	5.828 CC, ES		
14,400.0	8,036.0	8,138.9	7,918.5	108.3	32.2	-90.00	5,923.2	-1,509.3	698.3	577.9	120.40	5.800 SF		
14,500.0	8,036.0	8,138.9	7,918.5	110.1	32.2	-90.00	5,923.2	-1,509.3	718.1	595.9	122.15	5.879		
14,600.0	8,036.0	8,138.9	7,918.5	111.8	32.2	-90.00	5,923.2	-1,509.3	750.7	626.8	123.90	6.059		
14,700.0	8,036.0	8,138.9	7,918.5	113.5	32.2	-90.00	5,923.2	-1,509.3	794.6	669.0	125.66	6.324		
14,800.0	8,036.0	8,138.9	7,918.5	115.2	32.2	-90.00	5,923.2	-1,509.3	848.1	720.7	127.41	6.656		
14,900.0	8,036.0	8,138.9	7,918.5	116.9	32.2	-90.00	5,923.2	-1,509.3	909.4	780.2	129.17	7.041		
15,009.1	8,036.0	8,138.9	7,918.5	118.8	32.2	-90.00	5,923.2	-1,509.3	983.6	852.5	131.08	7.503		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 6-8-20 (EXISTING) - ENCANA WELL - SURV											Offset Site Error:		0.0 ft	
Survey Program: 134-Geolink 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		
12,600.0	8,036.0	8,110.8	8,016.7	78.1	20.8	87.59	4,756.2	-167.7	987.2	891.0	96.17	10.265		
12,700.0	8,036.0	8,113.7	8,019.6	79.8	20.8	87.75	4,756.3	-167.6	927.9	830.5	97.38	9.529		
12,809.1	8,036.0	8,116.9	8,022.8	81.6	20.8	87.94	4,756.4	-167.6	868.2	769.6	98.59	8.806		
12,900.0	8,036.0	8,119.5	8,025.4	83.1	20.8	88.14	4,756.4	-167.5	824.7	724.5	100.18	8.232		
13,000.0	8,036.0	8,122.5	8,028.4	84.7	20.8	88.37	4,756.5	-167.5	786.2	684.3	101.93	7.713		
13,100.0	8,036.0	8,125.4	8,031.3	86.4	20.8	88.59	4,756.6	-167.4	759.1	655.4	103.68	7.321		
13,200.0	8,036.0	8,128.3	8,034.2	88.1	20.8	88.82	4,756.7	-167.3	744.5	639.1	105.43	7.062		
13,259.1	8,036.0	8,130.0	8,035.9	89.1	20.8	88.95	4,756.7	-167.3	742.2	635.7	106.47	6.971	CC, ES	
13,300.0	8,036.0	8,131.2	8,037.1	89.8	20.8	89.04	4,756.8	-167.3	743.3	636.1	107.18	6.935	SF	
13,400.0	8,036.0	8,134.1	8,040.0	91.4	20.8	89.26	4,756.8	-167.2	755.4	646.5	108.93	6.935		
13,500.0	8,036.0	8,136.9	8,042.8	93.1	20.8	89.49	4,756.9	-167.2	780.4	669.7	110.68	7.050		
13,600.0	8,036.0	8,142.0	8,047.9	94.8	20.8	89.88	4,757.1	-167.0	816.9	704.4	112.44	7.265		
13,700.0	8,036.0	8,142.7	8,048.6	96.5	20.8	89.93	4,757.1	-167.0	863.5	749.3	114.18	7.562		
13,800.0	8,036.0	8,145.6	8,051.5	98.2	20.8	90.16	4,757.2	-167.0	918.7	802.7	115.93	7.924		
13,900.0	8,036.0	8,148.6	8,054.5	99.9	20.8	90.38	4,757.3	-166.9	981.0	863.3	117.68	8.336		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design													S29-T1N-R68W (Pratt/Waste Connections) - EDWARD P COSTIGAN 1 (EXISTING) - ENCANA WELL		Offset Site Error:		0.0 ft	
Survey Program: 100-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	Separation	Warning					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor						
13,900.0	8,036.0	8,048.1	8,046.9	99.9	14.1	90.21	5,622.8	121.7	988.1	876.8	111.26	8.881						
14,000.0	8,036.0	8,048.4	8,047.3	101.6	14.1	90.23	5,622.8	121.7	968.3	855.3	113.01	8.568						
14,100.0	8,036.0	8,048.8	8,047.7	103.2	14.1	90.25	5,622.8	121.6	958.5	843.8	114.76	8.353						
14,143.3	8,036.0	8,049.0	8,047.9	104.0	14.1	90.26	5,622.8	121.6	957.6	842.0	115.52	8.289	CC, ES					
14,200.0	8,036.0	8,049.2	8,048.1	104.9	14.1	90.27	5,622.8	121.6	959.2	842.7	116.51	8.233						
14,300.0	8,036.0	8,049.6	8,048.4	106.6	14.1	90.29	5,622.8	121.6	970.3	852.1	118.26	8.205	SF					
14,400.0	8,036.0	8,049.9	8,048.8	108.3	14.1	90.32	5,622.8	121.6	991.5	871.5	120.01	8.262						

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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	313.9						
100.0	100.0	72.5	72.5	0.1	0.1	11.89	306.0	64.4	312.7	312.5	0.25	1,243.272			
200.0	200.0	172.5	172.5	0.3	0.3	11.89	306.0	64.4	312.7	312.1	0.60	520.680			
300.0	300.0	272.5	272.5	0.5	0.5	11.89	306.0	64.4	312.7	311.8	0.95	329.294			
400.0	400.0	372.5	372.5	0.6	0.7	11.89	306.0	64.4	312.7	311.4	1.30	240.788 CC, ES			
500.0	500.0	472.5	472.5	0.8	0.8	142.68	306.0	64.4	313.4	311.8	1.65	190.189			
600.0	600.0	572.5	572.5	1.0	1.0	142.96	306.0	64.4	315.5	313.5	2.00	157.918			
700.0	699.9	672.4	672.4	1.2	1.2	143.41	306.0	64.4	319.0	316.6	2.35	135.763			
800.0	799.7	772.2	772.2	1.4	1.3	144.03	306.0	64.4	323.9	321.2	2.70	119.790			
900.0	899.4	871.9	871.9	1.6	1.5	144.79	306.0	64.4	330.3	327.2	3.06	107.880			
1,000.0	998.9	971.4	971.4	1.8	1.7	145.68	306.0	64.4	338.2	334.8	3.42	98.798			
1,100.0	1,098.3	1,070.8	1,070.8	2.1	1.9	146.68	306.0	64.4	347.6	343.8	3.79	91.771			
1,200.0	1,197.4	1,169.9	1,169.9	2.3	2.0	147.76	306.0	64.4	358.6	354.5	4.16	86.295			
1,243.8	1,240.7	1,213.2	1,213.2	2.4	2.1	148.26	306.0	64.4	363.9	359.6	4.32	84.303			
1,300.0	1,296.3	1,268.8	1,268.8	2.6	2.2	148.92	306.0	64.4	371.0	366.5	4.53	81.972			
1,400.0	1,395.3	1,367.8	1,367.8	2.9	2.4	150.05	306.0	64.4	383.7	378.8	4.90	78.357			
1,500.0	1,494.2	1,466.7	1,466.7	3.2	2.6	151.11	306.0	64.4	396.5	391.2	5.27	75.300			
1,600.0	1,593.1	1,565.6	1,565.6	3.5	2.7	152.10	306.0	64.4	409.4	403.8	5.63	72.687			
1,700.0	1,692.0	1,664.5	1,664.5	3.8	2.9	153.03	306.0	64.4	422.5	416.5	6.00	70.435			
1,800.0	1,790.9	1,763.4	1,763.4	4.1	3.1	153.90	306.0	64.4	435.6	429.3	6.36	68.477			
1,900.0	1,889.9	1,862.4	1,862.4	4.4	3.3	154.72	306.0	64.4	448.9	442.2	6.72	66.762			
2,000.0	1,988.8	1,961.3	1,961.3	4.7	3.4	155.50	306.0	64.4	462.2	455.1	7.08	65.249			
2,100.0	2,087.7	2,060.2	2,060.2	5.0	3.6	156.23	306.0	64.4	475.6	468.2	7.44	63.906			
2,200.0	2,186.6	2,159.1	2,159.1	5.3	3.8	156.92	306.0	64.4	489.1	481.3	7.80	62.707			
2,300.0	2,285.5	2,258.0	2,258.0	5.6	3.9	157.58	306.0	64.4	502.7	494.5	8.16	61.631			
2,400.0	2,384.4	2,356.9	2,356.9	5.9	4.1	158.20	306.0	64.4	516.3	507.8	8.51	60.660			
2,500.0	2,483.4	2,455.9	2,455.9	6.2	4.3	158.78	306.0	64.4	530.0	521.1	8.87	59.781			
2,600.0	2,582.3	2,554.8	2,554.8	6.5	4.5	159.34	306.0	64.4	543.7	534.5	9.22	58.980			
2,700.0	2,681.2	2,653.7	2,653.7	6.8	4.6	159.87	306.0	64.4	557.5	547.9	9.57	58.249			
2,800.0	2,780.1	2,752.6	2,752.6	7.1	4.8	160.38	306.0	64.4	571.3	561.4	9.92	57.579			
2,900.0	2,879.0	2,851.5	2,851.5	7.4	5.0	160.86	306.0	64.4	585.1	574.9	10.27	56.963			
3,000.0	2,977.9	2,950.4	2,950.4	7.7	5.1	161.32	306.0	64.4	599.0	588.4	10.62	56.395			
3,100.0	3,076.9	3,049.4	3,049.4	8.0	5.3	161.76	306.0	64.4	613.0	602.0	10.97	55.869			
3,200.0	3,175.8	3,148.3	3,148.3	8.3	5.5	162.18	306.0	64.4	626.9	615.6	11.32	55.381			
3,300.0	3,274.7	3,247.2	3,247.2	8.7	5.7	162.58	306.0	64.4	640.9	629.3	11.67	54.927			
3,400.0	3,373.6	3,346.1	3,346.1	9.0	5.8	162.97	306.0	64.4	655.0	643.0	12.02	54.504			
3,500.0	3,472.5	3,445.0	3,445.0	9.3	6.0	163.33	306.0	64.4	669.0	656.7	12.36	54.109			
3,600.0	3,571.4	3,543.9	3,543.9	9.6	6.2	163.69	306.0	64.4	683.1	670.4	12.71	53.738			
3,700.0	3,670.4	3,642.9	3,642.9	9.9	6.4	164.02	306.0	64.4	697.2	684.2	13.06	53.391			
3,800.0	3,769.3	3,741.8	3,741.8	10.2	6.5	164.35	306.0	64.4	711.3	697.9	13.41	53.064			
3,900.0	3,868.2	3,840.7	3,840.7	10.5	6.7	164.66	306.0	64.4	725.5	711.7	13.75	52.757			
4,000.0	3,967.1	3,939.6	3,939.6	10.8	6.9	164.96	306.0	64.4	739.7	725.6	14.10	52.466			
4,100.0	4,066.0	4,038.5	4,038.5	11.1	7.0	165.25	306.0	64.4	753.9	739.4	14.44	52.192			
4,200.0	4,165.0	4,137.5	4,137.5	11.4	7.2	165.53	306.0	64.4	768.1	753.3	14.79	51.932			
4,300.0	4,263.9	4,236.4	4,236.4	11.8	7.4	165.80	306.0	64.4	782.3	767.2	15.14	51.686			
4,400.0	4,362.8	4,335.3	4,335.3	12.1	7.6	166.06	306.0	64.4	796.5	781.1	15.48	51.453			
4,500.0	4,461.7	4,434.2	4,434.2	12.4	7.7	166.31	306.0	64.4	810.8	795.0	15.83	51.231			
4,600.0	4,560.6	4,533.1	4,533.1	12.7	7.9	166.55	306.0	64.4	825.1	808.9	16.17	51.020			
4,700.0	4,659.5	4,632.0	4,632.0	13.0	8.1	166.78	306.0	64.4	839.4	822.8	16.52	50.819			
4,800.0	4,758.5	4,731.0	4,731.0	13.3	8.3	167.01	306.0	64.4	853.6	836.8	16.86	50.627			
4,900.0	4,857.4	4,829.9	4,829.9	13.6	8.4	167.22	306.0	64.4	868.0	850.8	17.21	50.444			
5,000.0	4,956.3	4,928.8	4,928.8	13.9	8.6	167.43	306.0	64.4	882.3	864.7	17.55	50.269			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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		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			
5,100.0	5,055.2	5,027.7	5,027.7	14.2	8.8	167.64	306.0	64.4	896.6	878.7	17.90	50.101		
5,200.0	5,154.1	5,126.6	5,126.6	14.5	8.9	167.84	306.0	64.4	911.0	892.7	18.24	49.941		
5,300.0	5,253.0	5,225.5	5,225.5	14.9	9.1	168.03	306.0	64.4	925.3	906.7	18.59	49.787		
5,400.0	5,352.0	5,324.5	5,324.5	15.2	9.3	168.21	306.0	64.4	939.7	920.8	18.93	49.639		
5,500.0	5,450.9	5,423.4	5,423.4	15.5	9.5	168.39	306.0	64.4	954.1	934.8	19.28	49.497		
5,600.0	5,549.8	5,522.3	5,522.3	15.8	9.6	168.57	306.0	64.4	968.4	948.8	19.62	49.361		
5,700.0	5,648.7	5,621.2	5,621.2	16.1	9.8	168.74	306.0	64.4	982.8	962.9	19.96	49.230		
5,800.0	5,747.6	5,720.1	5,720.1	16.4	10.0	168.90	306.0	64.4	997.2	976.9	20.31	49.104		
8,350.0	8,016.3	7,988.8	7,988.8	20.8	13.9	85.53	306.0	64.4	985.4	957.0	28.31	34.802		
8,400.0	8,026.2	7,998.7	7,998.7	20.9	14.0	87.24	306.0	64.4	970.6	942.1	28.51	34.051		
8,450.0	8,032.7	8,005.2	8,005.2	21.0	14.0	88.63	306.0	64.4	957.6	928.9	28.70	33.366		
8,500.0	8,035.7	8,008.2	8,008.2	21.1	14.0	89.69	306.0	64.4	946.6	917.7	28.91	32.741		
8,519.1	8,036.0	8,008.5	8,008.5	21.2	14.0	90.00	306.0	64.4	943.0	914.0	29.00	32.516		
8,600.0	8,036.0	8,008.5	8,008.5	21.5	14.0	90.00	306.0	64.4	931.5	902.1	29.45	31.633		
8,692.1	8,036.0	8,008.5	8,008.5	22.0	14.0	90.00	306.0	64.4	926.9	896.8	30.10	30.793		
8,700.0	8,036.0	8,008.5	8,008.5	22.0	14.0	90.00	306.0	64.4	927.0	896.8	30.16	30.737		
8,800.0	8,036.0	8,008.5	8,008.5	22.7	14.0	90.00	306.0	64.4	933.2	902.2	31.02	30.082		
8,859.1	8,036.0	8,008.5	8,008.5	23.1	14.0	90.00	306.0	64.4	941.9	910.3	31.59	29.811		
8,900.0	8,036.0	8,008.5	8,008.5	23.4	14.0	90.00	306.0	64.4	950.0	918.0	32.01	29.673		
9,000.0	8,036.0	8,008.5	8,008.5	24.3	14.0	90.00	306.0	64.4	976.7	943.6	33.12	29.493 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 4-2-29 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 193-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		
11,000.0	8,036.0	8,484.5	7,946.0	51.8	45.6	-88.56	3,313.0	-1,533.3	946.4	875.1	71.32	13.270		
11,100.0	8,036.0	8,486.5	7,948.0	53.4	45.6	-88.76	3,313.1	-1,533.3	869.3	796.3	73.01	11.907		
11,200.0	8,036.0	8,488.5	7,950.0	55.0	45.6	-88.95	3,313.1	-1,533.3	797.3	722.6	74.70	10.673		
11,300.0	8,036.0	8,490.5	7,951.9	56.6	45.6	-89.15	3,313.1	-1,533.3	731.9	655.5	76.40	9.580		
11,400.0	8,036.0	8,492.4	7,953.9	58.3	45.6	-89.35	3,313.2	-1,533.3	675.0	596.9	78.09	8.643		
11,500.0	8,036.0	8,494.4	7,955.9	59.9	45.6	-89.54	3,313.2	-1,533.3	628.9	549.1	79.80	7.881		
11,600.0	8,036.0	8,496.4	7,957.9	61.5	45.6	-89.74	3,313.3	-1,533.3	596.2	514.7	81.50	7.315		
11,700.0	8,036.0	8,498.4	7,959.8	63.1	45.6	-89.93	3,313.3	-1,533.3	579.1	495.9	83.21	6.960		
11,750.4	8,036.0	8,499.3	7,960.8	64.0	45.6	-90.03	3,313.3	-1,533.3	576.9	492.9	84.07	6.862 CC, ES		
11,800.0	8,036.0	8,500.3	7,961.8	64.8	45.6	-90.13	3,313.3	-1,533.3	579.1	494.1	84.92	6.819 SF		
11,900.0	8,036.0	8,502.3	7,963.8	66.4	45.6	-90.32	3,313.4	-1,533.3	596.0	509.4	86.63	6.880		
12,000.0	8,036.0	8,504.2	7,965.7	68.1	45.6	-90.52	3,313.4	-1,533.3	628.6	540.3	88.35	7.115		
12,100.0	8,036.0	8,506.2	7,967.7	69.8	45.6	-90.71	3,313.5	-1,533.3	674.6	584.5	90.06	7.490		
12,200.0	8,036.0	8,508.1	7,969.6	71.4	45.6	-90.91	3,313.5	-1,533.3	731.4	639.6	91.78	7.969		
12,300.0	8,036.0	8,510.1	7,971.6	73.1	45.6	-91.10	3,313.5	-1,533.3	796.8	703.3	93.49	8.522		
12,400.0	8,036.0	8,512.0	7,973.5	74.8	45.6	-91.29	3,313.6	-1,533.3	868.7	773.5	95.21	9.124		
12,500.0	8,036.0	8,514.0	7,975.4	76.4	45.6	-91.48	3,313.6	-1,533.3	945.8	848.9	96.93	9.758		
12,559.1	8,036.0	8,515.1	7,976.6	77.4	45.6	-91.60	3,313.6	-1,533.3	993.3	895.4	97.95	10.142		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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							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	-89.95	0.0	-19.6	25.0					
100.0	100.0	84.5	84.5	0.1	0.1	-89.95	0.0	-19.6	19.6	19.4	0.25	77.464		
200.0	200.0	184.5	184.5	0.3	0.3	-89.95	0.0	-19.6	19.6	19.0	0.60	32.750	CC, ES	
300.0	300.0	284.2	284.2	0.5	0.5	-90.79	-0.3	-20.2	20.2	19.2	0.95	21.273		
400.0	400.0	383.9	383.9	0.6	0.7	-93.57	-1.4	-22.2	22.3	21.0	1.30	17.162		
500.0	500.0	483.5	483.3	0.8	0.8	34.44	-3.3	-25.8	25.3	23.6	1.65	15.357		
600.0	600.0	583.0	582.7	1.0	1.0	33.01	-6.1	-30.9	28.5	26.5	2.00	14.274		
700.0	699.9	682.4	681.8	1.2	1.2	32.47	-9.6	-37.5	31.9	29.6	2.35	13.568		
800.0	799.7	781.8	780.8	1.4	1.5	32.58	-14.0	-45.6	35.5	32.8	2.71	13.079		
900.0	899.4	881.1	879.5	1.6	1.7	33.15	-19.2	-55.2	39.2	36.1	3.08	12.721		
1,000.0	998.9	980.4	978.0	1.8	2.0	34.07	-25.2	-66.3	43.1	39.6	3.46	12.443		
1,100.0	1,098.3	1,079.6	1,076.1	2.1	2.3	35.23	-32.0	-78.9	47.2	43.3	3.86	12.212		
1,200.0	1,197.4	1,178.7	1,173.9	2.3	2.6	36.56	-39.6	-93.0	51.4	47.1	4.28	12.004		
1,243.8	1,240.7	1,222.1	1,216.7	2.4	2.7	37.18	-43.2	-99.6	53.4	48.9	4.48	11.918		
1,300.0	1,296.3	1,277.7	1,271.4	2.6	2.9	37.85	-48.0	-108.5	56.1	51.4	4.73	11.863		
1,400.0	1,395.3	1,376.9	1,368.6	2.9	3.3	38.36	-57.2	-125.5	62.2	57.0	5.18	12.007		
1,500.0	1,494.2	1,476.6	1,466.4	3.2	3.7	38.59	-66.7	-143.1	68.7	63.1	5.63	12.201		
1,600.0	1,593.1	1,576.4	1,564.1	3.5	4.1	38.77	-76.2	-160.7	75.3	69.2	6.09	12.357		
1,700.0	1,692.0	1,676.2	1,661.9	3.8	4.4	38.93	-85.7	-178.2	81.8	75.2	6.55	12.484		
1,800.0	1,790.9	1,776.0	1,759.7	4.1	4.8	39.07	-95.2	-195.8	88.3	81.3	7.02	12.588		
1,900.0	1,889.9	1,875.8	1,857.4	4.4	5.2	39.18	-104.6	-213.4	94.9	87.4	7.48	12.675		
2,000.0	1,988.8	1,975.6	1,955.2	4.7	5.6	39.28	-114.1	-230.9	101.4	93.5	7.95	12.749		
2,100.0	2,087.7	2,075.4	2,053.0	5.0	6.0	39.37	-123.6	-248.5	108.0	99.5	8.43	12.812		
2,200.0	2,186.6	2,175.1	2,150.7	5.3	6.4	39.45	-133.1	-266.1	114.5	105.6	8.90	12.866		
2,300.0	2,285.5	2,274.9	2,248.5	5.6	6.7	39.52	-142.6	-283.6	121.0	111.7	9.37	12.913		
2,400.0	2,384.4	2,374.7	2,346.3	5.9	7.1	39.59	-152.1	-301.2	127.6	117.7	9.85	12.954		
2,500.0	2,483.4	2,474.5	2,444.1	6.2	7.5	39.64	-161.6	-318.7	134.1	123.8	10.32	12.990		
2,600.0	2,582.3	2,574.3	2,541.8	6.5	7.9	39.69	-171.1	-336.3	140.7	129.9	10.80	13.022		
2,700.0	2,681.2	2,674.1	2,639.6	6.8	8.3	39.74	-180.5	-353.9	147.2	135.9	11.28	13.051		
2,800.0	2,780.1	2,773.9	2,737.4	7.1	8.7	39.78	-190.0	-371.4	153.7	142.0	11.76	13.076		
2,900.0	2,879.0	2,873.6	2,835.1	7.4	9.1	39.82	-199.5	-389.0	160.3	148.1	12.24	13.099		
3,000.0	2,977.9	2,973.4	2,932.9	7.7	9.5	39.86	-209.0	-406.6	166.8	154.1	12.72	13.119		
3,100.0	3,076.9	3,073.2	3,030.7	8.0	9.9	39.89	-218.5	-424.1	173.4	160.2	13.20	13.138		
3,200.0	3,175.8	3,173.0	3,128.4	8.3	10.3	39.92	-228.0	-441.7	179.9	166.2	13.68	13.155		
3,300.0	3,274.7	3,272.8	3,226.2	8.7	10.7	39.95	-237.5	-459.3	186.5	172.3	14.16	13.171		
3,400.0	3,373.6	3,372.6	3,324.0	9.0	11.0	39.98	-247.0	-476.8	193.0	178.4	14.64	13.185		
3,500.0	3,472.5	3,472.4	3,421.7	9.3	11.4	40.01	-256.4	-494.4	199.5	184.4	15.12	13.198		
3,600.0	3,571.4	3,572.1	3,519.5	9.6	11.8	40.03	-265.9	-512.0	206.1	190.5	15.60	13.210		
3,700.0	3,670.4	3,671.9	3,617.3	9.9	12.2	40.05	-275.4	-529.5	212.6	196.5	16.08	13.221		
3,800.0	3,769.3	3,771.7	3,715.0	10.2	12.6	40.07	-284.9	-547.1	219.2	202.6	16.56	13.231		
3,900.0	3,868.2	3,871.5	3,812.8	10.5	13.0	40.09	-294.4	-564.7	225.7	208.7	17.05	13.241		
4,000.0	3,967.1	3,971.3	3,910.6	10.8	13.4	40.11	-303.9	-582.2	232.3	214.7	17.53	13.250		
4,100.0	4,066.0	4,071.1	4,008.3	11.1	13.8	40.13	-313.4	-599.8	238.8	220.8	18.01	13.258		
4,200.0	4,165.0	4,170.9	4,106.1	11.4	14.2	40.15	-322.9	-617.4	245.3	226.9	18.49	13.266		
4,300.0	4,263.9	4,270.6	4,203.9	11.8	14.6	40.16	-332.4	-634.9	251.9	232.9	18.98	13.273		
4,400.0	4,362.8	4,370.4	4,301.7	12.1	15.0	40.18	-341.8	-652.5	258.4	239.0	19.46	13.280		
4,500.0	4,461.7	4,470.2	4,399.4	12.4	15.4	40.19	-351.3	-670.0	265.0	245.0	19.94	13.286		
4,600.0	4,560.6	4,570.0	4,497.2	12.7	15.8	40.20	-360.8	-687.6	271.5	251.1	20.43	13.292		
4,700.0	4,659.5	4,669.8	4,595.0	13.0	16.2	40.22	-370.3	-705.2	278.1	257.1	20.91	13.298		
4,800.0	4,758.5	4,769.6	4,692.7	13.3	16.5	40.23	-379.8	-722.7	284.6	263.2	21.39	13.303		
4,900.0	4,857.4	4,869.4	4,790.5	13.6	16.9	40.24	-389.3	-740.3	291.1	269.3	21.88	13.308		
5,000.0	4,956.3	4,969.1	4,888.3	13.9	17.3	40.25	-398.8	-757.9	297.7	275.3	22.36	13.313		

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

Cathedral Energy Services

Anticollision Report

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Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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							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	5,055.2	5,068.9	4,986.0	14.2	17.7	40.26	-408.3	-775.4	304.2	281.4	22.84	13.318		
5,200.0	5,154.1	5,168.7	5,083.8	14.5	18.1	40.27	-417.7	-793.0	310.8	287.4	23.33	13.322		
5,300.0	5,253.0	5,268.5	5,181.6	14.9	18.5	40.28	-427.2	-810.6	317.3	293.5	23.81	13.326		
5,400.0	5,352.0	5,368.3	5,279.3	15.2	18.9	40.29	-436.7	-828.1	323.9	299.6	24.30	13.330		
5,500.0	5,450.9	5,468.1	5,377.1	15.5	19.3	40.30	-446.2	-845.7	330.4	305.6	24.78	13.333		
5,600.0	5,549.8	5,567.9	5,474.9	15.8	19.7	40.31	-455.7	-863.3	336.9	311.7	25.26	13.337		
5,700.0	5,648.7	5,667.6	5,572.6	16.1	20.1	40.32	-465.2	-880.8	343.5	317.7	25.75	13.340		
5,800.0	5,747.6	5,767.4	5,670.4	16.4	20.5	40.33	-474.7	-898.4	350.0	323.8	26.23	13.344		
5,900.0	5,846.6	5,867.2	5,768.2	16.7	20.9	40.33	-484.2	-916.0	356.6	329.9	26.72	13.347		
6,000.0	5,945.5	5,967.0	5,865.9	17.0	21.3	40.34	-493.6	-933.5	363.1	335.9	27.20	13.350		
6,100.0	6,044.4	6,066.8	5,963.7	17.3	21.7	40.35	-503.1	-951.1	369.7	342.0	27.69	13.352		
6,200.0	6,143.3	6,166.6	6,061.5	17.6	22.1	40.36	-512.6	-968.7	376.2	348.0	28.17	13.355		
6,300.0	6,242.2	6,266.4	6,159.2	18.0	22.5	40.36	-522.1	-986.2	382.7	354.1	28.65	13.358		
6,400.0	6,341.1	6,366.1	6,257.0	18.3	22.8	40.37	-531.6	-1,003.8	389.3	360.2	29.14	13.360		
6,500.0	6,440.1	6,465.9	6,354.8	18.6	23.2	40.38	-541.1	-1,021.3	395.8	366.2	29.62	13.362		
6,600.0	6,539.0	6,565.7	6,452.6	18.9	23.6	40.38	-550.6	-1,038.9	402.4	372.3	30.11	13.365		
6,700.0	6,637.9	6,665.5	6,550.3	19.2	24.0	40.39	-560.1	-1,056.5	408.9	378.3	30.59	13.367		
6,800.0	6,736.8	6,765.3	6,648.1	19.5	24.4	40.39	-569.6	-1,074.0	415.5	384.4	31.08	13.369		
6,900.0	6,835.7	6,865.1	6,745.9	19.8	24.8	40.40	-579.0	-1,091.6	422.0	390.4	31.56	13.371		
7,000.0	6,934.6	6,964.9	6,843.6	20.1	25.2	40.40	-588.5	-1,109.2	428.5	396.5	32.05	13.373		
7,100.0	7,033.6	7,064.6	6,941.4	20.4	25.6	40.41	-598.0	-1,126.7	435.1	402.6	32.53	13.375		
7,200.0	7,132.5	7,164.4	7,039.2	20.8	26.0	40.41	-607.5	-1,144.3	441.6	408.6	33.01	13.377		
7,300.0	7,231.4	7,264.2	7,136.9	21.1	26.4	40.42	-617.0	-1,161.9	448.2	414.7	33.50	13.379		
7,329.8	7,260.9	7,293.9	7,166.0	21.2	26.5	40.42	-619.8	-1,167.1	450.1	416.5	33.64	13.379		
7,350.0	7,280.9	7,314.1	7,185.8	21.2	26.6	30.77	-621.7	-1,170.6	451.4	417.7	33.76	13.371		
7,400.0	7,330.5	7,363.9	7,234.6	21.3	26.8	-1.05	-626.5	-1,179.4	454.5	420.7	33.89	13.412		
7,450.0	7,380.1	7,413.4	7,283.1	21.4	27.0	-31.22	-631.2	-1,188.1	457.5	423.7	33.81	13.534		
7,500.0	7,429.4	7,462.3	7,331.0	21.5	27.2	-50.06	-635.8	-1,196.7	460.5	427.0	33.54	13.733		
7,550.0	7,478.3	7,510.4	7,378.1	21.5	27.4	-61.41	-640.4	-1,205.2	463.8	430.6	33.11	14.007		
7,600.0	7,526.3	7,557.4	7,424.2	21.5	27.6	-69.07	-644.9	-1,213.5	467.4	434.9	32.57	14.354		
7,650.0	7,573.4	7,602.8	7,468.7	21.5	27.7	-74.73	-648.2	-1,221.6	471.9	440.0	31.98	14.758		
7,700.0	7,619.3	7,649.3	7,514.3	21.4	27.9	-79.07	-648.1	-1,230.5	477.4	446.0	31.41	15.199		
7,750.0	7,663.8	7,697.5	7,561.3	21.4	28.0	-82.57	-644.1	-1,240.3	483.7	452.9	30.88	15.666		
7,800.0	7,706.6	7,747.5	7,609.4	21.3	28.1	-85.45	-635.7	-1,251.1	490.8	460.4	30.39	16.150		
7,850.0	7,747.5	7,799.4	7,658.2	21.2	28.2	-87.87	-622.5	-1,262.7	498.4	468.5	29.95	16.642		
7,900.0	7,786.4	7,853.2	7,707.3	21.1	28.3	-89.89	-604.2	-1,275.1	506.5	476.9	29.56	17.133		
7,950.0	7,823.0	7,909.0	7,755.9	21.1	28.4	-91.57	-580.4	-1,288.4	514.8	485.6	29.23	17.612		
8,000.0	7,857.2	7,966.8	7,803.5	21.0	28.4	-92.93	-550.7	-1,302.4	523.3	494.3	28.96	18.069		
8,050.0	7,888.8	8,026.4	7,849.0	20.9	28.5	-93.98	-515.1	-1,316.9	531.6	502.9	28.75	18.493		
8,100.0	7,917.6	8,087.8	7,891.6	20.8	28.5	-94.74	-473.6	-1,331.8	539.8	511.2	28.59	18.876		
8,150.0	7,943.6	8,150.7	7,930.3	20.8	28.6	-95.20	-426.4	-1,346.8	547.5	519.0	28.51	19.208		
8,200.0	7,966.5	8,214.7	7,964.1	20.7	28.6	-95.37	-374.1	-1,361.7	554.8	526.4	28.49	19.476		
8,250.0	7,986.4	8,279.6	7,992.1	20.7	28.7	-95.26	-317.3	-1,376.1	561.6	533.0	28.54	19.677		
8,300.0	8,003.0	8,345.0	8,013.5	20.7	28.7	-94.87	-257.2	-1,389.8	567.7	539.0	28.66	19.810		
8,350.0	8,016.3	8,410.3	8,027.9	20.8	28.8	-94.22	-194.8	-1,402.5	573.1	544.3	28.86	19.862		
8,400.0	8,026.2	8,475.1	8,035.1	20.9	29.0	-93.33	-131.4	-1,413.9	577.9	548.8	29.13	19.838		
8,450.0	8,032.7	8,532.1	8,036.0	21.0	29.1	-92.36	-75.2	-1,423.0	582.3	552.8	29.51	19.732		
8,500.0	8,035.7	8,581.7	8,036.0	21.1	29.3	-91.70	-26.2	-1,430.8	587.0	557.2	29.81	19.691		
8,519.1	8,036.0	8,600.8	8,036.0	21.2	29.3	-91.52	-7.4	-1,433.8	589.0	559.1	29.94	19.673		
8,600.0	8,036.0	8,681.2	8,036.0	21.5	29.6	-91.49	72.1	-1,446.3	597.5	566.7	30.75	19.429		
8,700.0	8,036.0	8,780.6	8,036.0	22.0	30.1	-91.47	170.3	-1,461.9	607.9	575.8	32.08	18.953		
8,800.0	8,036.0	8,880.1	8,036.0	22.7	30.7	-91.44	268.5	-1,477.5	618.4	584.6	33.71	18.344		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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						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		
8,859.1	8,036.0	8,938.9	8,036.0	23.1	31.1	-91.43	326.6	-1,486.7	624.5	589.7	34.81	17.942		
8,900.0	8,036.0	8,979.5	8,036.0	23.4	31.3	-91.42	366.7	-1,493.0	628.8	593.2	35.61	17.656		
9,000.0	8,036.0	9,079.0	8,036.0	24.3	32.1	-91.40	465.0	-1,508.6	639.3	601.5	37.75	16.934		
9,100.0	8,036.0	9,190.9	8,036.0	25.2	33.0	-91.37	575.6	-1,525.4	649.1	608.9	40.22	16.138		
9,200.0	8,036.0	9,311.2	8,036.0	26.3	34.0	-91.36	695.0	-1,540.0	656.1	613.1	42.99	15.263		
9,300.0	8,036.0	9,431.9	8,036.0	27.4	35.1	-91.35	815.2	-1,551.0	659.9	614.0	45.92	14.372		
9,400.0	8,036.0	9,552.8	8,036.0	28.6	36.2	-91.34	935.9	-1,558.1	660.6	611.6	48.97	13.489		
9,500.0	8,036.0	9,673.7	8,036.0	29.8	37.3	-91.35	1,056.7	-1,561.4	658.1	605.9	52.13	12.624		
9,600.0	8,036.0	9,794.2	8,036.0	31.1	38.5	-91.36	1,177.2	-1,560.9	652.4	597.0	55.37	11.783		
9,700.0	8,036.0	9,914.1	8,036.0	32.4	39.7	-91.39	1,297.1	-1,556.6	643.6	584.9	58.68	10.968		
9,800.0	8,036.0	10,015.7	8,036.0	33.8	40.8	-91.41	1,398.5	-1,551.0	632.9	571.2	61.77	10.247		
9,900.0	8,036.0	10,115.2	8,036.0	35.2	41.8	-91.44	1,497.8	-1,545.6	622.2	557.4	64.87	9.592		
10,000.0	8,036.0	10,214.6	8,036.0	36.6	43.0	-91.46	1,597.1	-1,540.1	611.5	543.5	68.01	8.992		
10,100.0	8,036.0	10,314.0	8,036.0	38.1	44.2	-91.49	1,696.4	-1,534.7	600.8	529.6	71.18	8.441		
10,200.0	8,036.0	10,413.5	8,036.0	39.5	45.4	-91.51	1,795.7	-1,529.2	590.1	515.7	74.38	7.934		
10,300.0	8,036.0	10,512.9	8,036.0	41.0	46.6	-91.54	1,894.9	-1,523.8	579.4	501.8	77.60	7.467		
10,359.1	8,036.0	10,571.7	8,036.0	41.9	47.4	-91.56	1,953.6	-1,520.5	573.1	493.6	79.52	7.207		
10,400.0	8,036.0	10,612.3	8,036.0	42.6	47.9	-91.57	1,994.2	-1,518.3	568.9	488.3	80.60	7.058		
10,500.0	8,036.0	10,711.9	8,036.0	44.1	49.2	-91.59	2,093.7	-1,512.8	559.8	476.5	83.22	6.726		
10,600.0	8,036.0	10,811.6	8,036.0	45.6	50.5	-91.61	2,193.2	-1,507.4	552.4	466.5	85.85	6.434		
10,659.1	8,036.0	10,870.7	8,036.0	46.5	51.3	-91.62	2,252.2	-1,504.1	548.8	461.4	87.40	6.280		
10,700.0	8,036.0	10,911.5	8,036.0	47.1	51.9	-91.63	2,292.9	-1,501.9	546.6	457.8	88.75	6.159		
10,800.0	8,036.0	11,011.3	8,036.0	48.7	53.3	-91.64	2,392.6	-1,496.4	541.1	449.0	92.06	5.878		
10,900.0	8,036.0	11,111.2	8,036.0	50.3	54.7	-91.66	2,492.3	-1,490.9	535.6	440.2	95.38	5.615		
11,000.0	8,036.0	11,211.0	8,036.0	51.8	56.1	-91.68	2,592.0	-1,485.5	530.1	431.4	98.72	5.370		
11,100.0	8,036.0	11,310.9	8,036.0	53.4	57.6	-91.70	2,691.7	-1,480.0	524.7	422.6	102.07	5.140		
11,200.0	8,036.0	11,410.7	8,036.0	55.0	59.0	-91.71	2,791.4	-1,474.5	519.2	413.7	105.43	4.924		
11,300.0	8,036.0	11,510.6	8,036.0	56.6	60.5	-91.73	2,891.1	-1,469.0	513.7	404.9	108.80	4.721		
11,400.0	8,036.0	11,610.4	8,036.0	58.3	62.0	-91.75	2,990.8	-1,463.6	508.2	396.0	112.18	4.530		
11,500.0	8,036.0	11,710.3	8,036.0	59.9	63.5	-91.77	3,090.5	-1,458.1	502.7	387.2	115.56	4.350		
11,600.0	8,036.0	11,810.1	8,036.0	61.5	65.0	-91.79	3,190.2	-1,452.6	497.2	378.3	118.95	4.180		
11,700.0	8,036.0	11,910.0	8,036.0	63.1	66.5	-91.81	3,289.9	-1,447.1	491.8	369.4	122.35	4.019		
11,800.0	8,036.0	12,009.8	8,036.0	64.8	68.1	-91.83	3,389.6	-1,441.7	486.3	360.5	125.75	3.867		
11,900.0	8,036.0	12,109.7	8,036.0	66.4	69.6	-91.85	3,489.3	-1,436.2	480.8	351.6	129.16	3.723		
12,000.0	8,036.0	12,209.5	8,036.0	68.1	71.2	-91.87	3,589.0	-1,430.7	475.3	342.7	132.57	3.585		
12,100.0	8,036.0	12,309.3	8,036.0	69.8	72.8	-91.89	3,688.7	-1,425.2	469.8	333.8	135.99	3.455		
12,200.0	8,036.0	12,409.2	8,036.0	71.4	74.3	-91.92	3,788.4	-1,419.8	464.4	324.9	139.41	3.331		
12,300.0	8,036.0	12,509.0	8,036.0	73.1	75.9	-91.94	3,888.1	-1,414.3	458.9	316.0	142.83	3.213		
12,400.0	8,036.0	12,600.0	8,036.0	74.8	77.4	-91.96	3,978.9	-1,410.0	454.2	308.1	146.11	3.108		
12,500.0	8,036.0	12,694.4	8,036.0	76.4	78.9	-91.97	4,073.2	-1,407.0	451.1	301.6	149.45	3.018		
12,559.1	8,036.0	12,749.2	8,036.0	77.4	79.8	-91.97	4,128.1	-1,406.1	450.0	298.6	151.40	2.972		
12,585.2	8,036.0	12,773.3	8,036.0	77.9	80.2	-91.97	4,152.2	-1,405.8	449.8	297.9	151.90	2.961		
12,600.0	8,036.0	12,787.1	8,036.0	78.1	80.4	-91.97	4,165.9	-1,405.7	449.9	297.7	152.17	2.956		
12,700.0	8,036.0	12,884.0	8,036.0	79.8	82.0	-91.96	4,262.9	-1,405.5	452.9	298.9	154.02	2.941		
12,809.1	8,036.0	12,992.9	8,036.0	81.6	83.8	-91.94	4,371.8	-1,405.5	460.4	304.5	155.88	2.953		
12,900.0	8,036.0	13,083.4	8,036.0	83.1	85.3	-91.90	4,462.3	-1,405.5	468.3	309.2	159.02	2.945		
13,000.0	8,036.0	13,183.0	8,036.0	84.7	86.9	-91.87	4,561.9	-1,405.5	476.9	314.4	162.48	2.935		
13,100.0	8,036.0	13,282.6	8,036.0	86.4	88.6	-91.84	4,661.5	-1,405.5	485.5	319.6	165.94	2.926		
13,200.0	8,036.0	13,382.3	8,036.0	88.1	90.2	-91.80	4,761.2	-1,405.5	494.1	324.7	169.40	2.917		
13,300.0	8,036.0	13,481.9	8,036.0	89.8	91.9	-91.77	4,860.8	-1,405.5	502.6	329.8	172.87	2.908		
13,400.0	8,036.0	13,581.6	8,036.0	91.4	93.5	-91.74	4,960.4	-1,405.5	511.1	334.8	176.34	2.899		
13,500.0	8,036.0	13,681.2	8,036.0	93.1	95.2	-91.72	5,060.1	-1,405.5	519.6	339.8	179.81	2.890		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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		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		
13,600.0	8,036.0	13,780.8	8,036.0	94.8	96.9	-91.69	5,159.7	-1,405.5	528.0	344.7	183.28	2.881		
13,700.0	8,036.0	13,880.5	8,036.0	96.5	98.5	-91.66	5,259.4	-1,405.5	536.4	349.6	186.76	2.872		
13,800.0	8,036.0	13,980.1	8,036.0	98.2	100.2	-91.64	5,359.0	-1,405.5	544.7	354.5	190.23	2.864		
13,900.0	8,036.0	14,079.8	8,036.0	99.9	101.9	-91.61	5,458.7	-1,405.5	553.0	359.3	193.71	2.855		
14,000.0	8,036.0	14,179.4	8,036.0	101.6	103.6	-91.59	5,558.3	-1,405.5	561.3	364.1	197.19	2.846		
14,100.0	8,036.0	14,279.1	8,036.0	103.2	105.2	-91.56	5,658.0	-1,405.5	569.5	368.8	200.67	2.838		
14,200.0	8,036.0	14,378.8	8,036.0	104.9	106.9	-91.54	5,757.7	-1,405.5	577.7	373.5	204.16	2.830		
14,300.0	8,036.0	14,478.4	8,036.0	106.6	108.6	-91.52	5,857.3	-1,405.5	585.8	378.2	207.64	2.821		
14,400.0	8,036.0	14,578.1	8,036.0	108.3	110.3	-91.50	5,957.0	-1,405.5	593.9	382.8	211.13	2.813		
14,500.0	8,036.0	14,677.8	8,036.0	110.1	112.0	-91.48	6,056.7	-1,405.5	602.0	387.4	214.62	2.805		
14,600.0	8,036.0	14,777.5	8,036.0	111.8	113.7	-91.46	6,156.4	-1,405.5	610.0	391.9	218.10	2.797		
14,700.0	8,036.0	14,877.1	8,036.0	113.5	115.3	-91.44	6,256.0	-1,405.5	618.0	396.4	221.59	2.789		
14,800.0	8,036.0	14,976.8	8,036.0	115.2	117.0	-91.42	6,355.7	-1,405.5	626.0	400.9	225.09	2.781		
14,900.0	8,036.0	15,076.5	8,036.0	116.9	118.7	-91.41	6,455.4	-1,405.5	633.9	405.3	228.58	2.773		
15,009.1	8,036.0	15,185.3	8,036.0	118.8	120.6	-91.39	6,564.2	-1,405.5	642.5	410.1	232.39	2.765		
15,100.0	8,036.0	15,275.9	8,036.0	120.3	122.1	-91.37	6,654.8	-1,405.5	648.9	412.5	236.39	2.745		
15,200.0	8,036.0	15,375.8	8,036.0	122.0	123.8	-91.36	6,754.7	-1,405.5	654.3	413.5	240.72	2.718		
15,300.0	8,036.0	15,475.7	8,036.0	123.8	125.5	-91.35	6,854.6	-1,405.5	657.9	412.9	244.99	2.685		
15,400.0	8,036.0	15,575.7	8,036.0	125.5	127.2	-91.35	6,954.6	-1,405.5	659.8	410.6	249.19	2.648		
15,459.1	8,036.0	15,634.8	8,036.0	126.5	128.2	-91.35	7,013.7	-1,405.5	660.1	408.5	251.65	2.623		
15,470.3	8,036.0	15,646.0	8,036.0	126.7	128.4	-91.35	7,024.9	-1,405.5	660.1	408.0	252.10	2.618		
15,500.0	8,036.0	15,675.7	8,036.0	127.2	128.9	-91.35	7,054.6	-1,405.5	660.0	406.9	253.14	2.607		
15,600.0	8,036.0	15,775.7	8,036.0	129.0	130.6	-91.35	7,154.6	-1,405.5	659.9	403.2	256.62	2.571		
15,700.0	8,036.0	15,875.7	8,036.0	130.7	132.4	-91.35	7,254.6	-1,405.5	659.7	399.6	260.10	2.536		
15,800.0	8,036.0	15,975.7	8,036.0	132.4	134.1	-91.35	7,354.6	-1,405.5	659.5	395.9	263.58	2.502		
15,900.0	8,036.0	16,075.7	8,036.0	134.2	135.8	-91.35	7,454.6	-1,405.5	659.3	392.2	267.07	2.469		
16,000.0	8,036.0	16,175.7	8,036.0	135.9	137.5	-91.35	7,554.6	-1,405.5	659.1	388.5	270.55	2.436		
16,100.0	8,036.0	16,275.7	8,036.0	137.6	139.2	-91.35	7,654.6	-1,405.5	658.9	384.8	274.03	2.404		
16,200.0	8,036.0	16,375.7	8,036.0	139.4	140.9	-91.35	7,754.6	-1,405.5	658.7	381.2	277.52	2.373		
16,300.0	8,036.0	16,475.7	8,036.0	141.1	142.6	-91.35	7,854.6	-1,405.5	658.5	377.5	281.00	2.343		
16,400.0	8,036.0	16,575.7	8,036.0	142.8	144.4	-91.35	7,954.6	-1,405.5	658.3	373.8	284.49	2.314		
16,500.0	8,036.0	16,675.7	8,036.0	144.6	146.1	-91.35	8,054.6	-1,405.5	658.1	370.1	287.98	2.285		
16,600.0	8,036.0	16,775.7	8,036.0	146.3	147.8	-91.35	8,154.6	-1,405.5	657.9	366.4	291.46	2.257		
16,700.0	8,036.0	16,875.7	8,036.0	148.0	149.5	-91.35	8,254.6	-1,405.5	657.7	362.8	294.95	2.230		
16,800.0	8,036.0	16,975.7	8,036.0	149.8	151.2	-91.35	8,354.6	-1,405.5	657.5	359.1	298.44	2.203		
16,900.0	8,036.0	17,075.7	8,036.0	151.5	153.0	-91.35	8,454.6	-1,405.5	657.3	355.4	301.93	2.177		
17,000.0	8,036.0	17,175.7	8,036.0	153.3	154.7	-91.35	8,554.6	-1,405.5	657.1	351.7	305.41	2.152		
17,042.4	8,036.0	17,218.2	8,036.0	154.0	155.4	-91.35	8,597.0	-1,405.5	657.1	350.2	306.89	2.141		
17,100.0	8,036.0	17,225.4	8,036.0	155.0	155.5	-91.35	8,604.3	-1,405.5	658.9	350.8	308.02	2.139 SF		
17,200.0	8,036.0	17,225.4	8,036.0	156.7	155.5	-91.35	8,604.3	-1,405.5	673.7	364.0	309.77	2.175		
17,300.0	8,036.0	17,225.4	8,036.0	158.5	155.5	-91.35	8,604.3	-1,405.5	702.7	391.1	311.51	2.256		
17,400.0	8,036.0	17,225.4	8,036.0	160.2	155.5	-91.35	8,604.3	-1,405.5	744.0	430.7	313.26	2.375		
17,500.0	8,036.0	17,225.4	8,036.0	162.0	155.5	-91.35	8,604.3	-1,405.5	795.8	480.8	315.00	2.526		
17,600.0	8,036.0	17,225.4	8,036.0	163.7	155.5	-91.35	8,604.3	-1,405.5	856.3	539.5	316.75	2.703		
17,700.0	8,036.0	17,225.4	8,036.0	165.4	155.5	-91.35	8,604.3	-1,405.5	923.6	605.1	318.50	2.900		
17,800.0	8,036.0	17,225.4	8,036.0	167.2	155.5	-91.35	8,604.3	-1,405.5	996.4	676.2	320.24	3.111		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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)				
0.0	0.0	0.0	0.0	0.0	0.0	-89.91	0.0	-8.4	17.6					
100.0	100.0	84.5	84.5	0.1	0.1	-89.91	0.0	-8.4	8.4	8.1	0.25	33.199		
200.0	200.0	184.5	184.5	0.3	0.3	-89.91	0.0	-8.4	8.4	7.8	0.60	14.036		
300.0	300.0	284.5	284.5	0.5	0.5	-89.91	0.0	-8.4	8.4	7.5	0.95	8.866 CC, ES		
400.0	400.0	384.4	384.4	0.6	0.6	-92.16	-0.3	-8.9	8.9	7.6	1.30	6.882		
500.0	500.0	484.2	484.2	0.8	0.8	34.62	-1.7	-10.9	10.3	8.6	1.65	6.227		
600.0	600.0	584.1	583.9	1.0	1.0	32.47	-3.9	-14.2	11.7	9.7	2.00	5.861		
700.0	699.9	683.8	683.6	1.2	1.2	31.56	-7.2	-19.0	13.3	10.9	2.35	5.641		
800.0	799.7	783.6	783.0	1.4	1.4	31.51	-11.5	-25.3	14.9	12.2	2.71	5.502		
900.0	899.4	883.3	882.3	1.6	1.6	32.07	-16.7	-32.9	16.7	13.6	3.08	5.410		
1,000.0	998.9	983.1	981.4	1.8	1.9	33.07	-22.8	-42.0	18.5	15.0	3.46	5.346		
1,100.0	1,098.3	1,082.7	1,080.3	2.1	2.1	34.36	-30.0	-52.6	20.4	16.6	3.86	5.297		
1,200.0	1,197.4	1,182.4	1,178.9	2.3	2.4	35.85	-38.1	-64.5	22.5	18.2	4.28	5.253		
1,243.8	1,240.7	1,226.0	1,222.0	2.4	2.6	36.55	-42.0	-70.2	23.4	18.9	4.47	5.234		
1,300.0	1,296.3	1,282.0	1,277.2	2.6	2.7	37.09	-47.2	-77.8	24.9	20.1	4.72	5.263		
1,400.0	1,395.3	1,381.6	1,375.2	2.9	3.1	36.55	-57.2	-92.6	28.6	23.4	5.16	5.544		
1,500.0	1,494.2	1,481.5	1,473.4	3.2	3.4	35.66	-67.5	-107.8	32.8	27.2	5.58	5.873		
1,600.0	1,593.1	1,581.4	1,571.6	3.5	3.8	34.97	-77.9	-123.0	37.0	31.0	6.01	6.155		
1,700.0	1,692.0	1,681.4	1,669.8	3.8	4.1	34.43	-88.2	-138.2	41.2	34.7	6.43	6.399		
1,800.0	1,790.9	1,781.3	1,768.0	4.1	4.5	33.98	-98.5	-153.4	45.4	38.5	6.86	6.613		
1,900.0	1,889.9	1,881.2	1,866.2	4.4	4.8	33.61	-108.9	-168.6	49.6	42.3	7.29	6.802		
2,000.0	1,988.8	1,981.1	1,964.4	4.7	5.2	33.30	-119.2	-183.8	53.8	46.0	7.71	6.969		
2,100.0	2,087.7	2,081.0	2,062.6	5.0	5.5	33.03	-129.5	-199.0	58.0	49.8	8.14	7.118		
2,200.0	2,186.6	2,180.9	2,160.9	5.3	5.9	32.80	-139.9	-214.2	62.2	53.6	8.57	7.252		
2,300.0	2,285.5	2,280.8	2,259.1	5.6	6.3	32.60	-150.2	-229.4	66.4	57.4	9.00	7.373		
2,400.0	2,384.4	2,380.7	2,357.3	5.9	6.6	32.42	-160.5	-244.6	70.6	61.2	9.43	7.483		
2,500.0	2,483.4	2,480.6	2,455.5	6.2	7.0	32.27	-170.9	-259.8	74.8	64.9	9.86	7.584		
2,600.0	2,582.3	2,580.6	2,553.7	6.5	7.4	32.13	-181.2	-275.0	79.0	68.7	10.29	7.675		
2,700.0	2,681.2	2,680.5	2,651.9	6.8	7.7	32.00	-191.5	-290.2	83.2	72.5	10.72	7.760		
2,800.0	2,780.1	2,780.4	2,750.1	7.1	8.1	31.89	-201.9	-305.4	87.4	76.3	11.15	7.837		
2,900.0	2,879.0	2,880.3	2,848.3	7.4	8.5	31.78	-212.2	-320.6	91.6	80.0	11.59	7.909		
3,000.0	2,977.9	2,980.2	2,946.5	7.7	8.8	31.69	-222.5	-335.8	95.8	83.8	12.02	7.976		
3,100.0	3,076.9	3,080.1	3,044.7	8.0	9.2	31.60	-232.9	-351.0	100.1	87.6	12.45	8.038		
3,200.0	3,175.8	3,180.0	3,142.9	8.3	9.5	31.52	-243.2	-366.2	104.3	91.4	12.88	8.095		
3,300.0	3,274.7	3,279.9	3,241.1	8.7	9.9	31.45	-253.6	-381.5	108.5	95.2	13.31	8.149		
3,400.0	3,373.6	3,379.8	3,339.3	9.0	10.3	31.38	-263.9	-396.7	112.7	98.9	13.74	8.200		
3,500.0	3,472.5	3,479.8	3,437.5	9.3	10.6	31.32	-274.2	-411.9	116.9	102.7	14.17	8.247		
3,600.0	3,571.4	3,579.7	3,535.7	9.6	11.0	31.26	-284.6	-427.1	121.1	106.5	14.61	8.292		
3,700.0	3,670.4	3,679.6	3,633.9	9.9	11.4	31.20	-294.9	-442.3	125.3	110.3	15.04	8.334		
3,800.0	3,769.3	3,779.5	3,732.1	10.2	11.7	31.15	-305.2	-457.5	129.5	114.1	15.47	8.373		
3,900.0	3,868.2	3,879.4	3,830.3	10.5	12.1	31.10	-315.6	-472.7	133.7	117.8	15.90	8.411		
4,000.0	3,967.1	3,979.3	3,928.5	10.8	12.5	31.06	-325.9	-487.9	138.0	121.6	16.33	8.446		
4,100.0	4,066.0	4,079.2	4,026.8	11.1	12.8	31.02	-336.2	-503.1	142.2	125.4	16.77	8.480		
4,200.0	4,165.0	4,179.1	4,125.0	11.4	13.2	30.98	-346.6	-518.3	146.4	129.2	17.20	8.511		
4,300.0	4,263.9	4,279.0	4,223.2	11.8	13.6	30.94	-356.9	-533.5	150.6	133.0	17.63	8.542		
4,400.0	4,362.8	4,379.0	4,321.4	12.1	13.9	30.90	-367.2	-548.7	154.8	136.7	18.06	8.570		
4,500.0	4,461.7	4,478.9	4,419.6	12.4	14.3	30.87	-377.6	-563.9	159.0	140.5	18.49	8.598		
4,600.0	4,560.6	4,578.8	4,517.8	12.7	14.7	30.84	-387.9	-579.1	163.2	144.3	18.93	8.624		
4,700.0	4,659.5	4,678.7	4,616.0	13.0	15.0	30.81	-398.2	-594.3	167.4	148.1	19.36	8.649		
4,800.0	4,758.5	4,778.6	4,714.2	13.3	15.4	30.78	-408.6	-609.5	171.6	151.9	19.79	8.673		
4,900.0	4,857.4	4,878.5	4,812.4	13.6	15.8	30.75	-418.9	-624.7	175.9	155.6	20.22	8.696		
5,000.0	4,956.3	4,978.4	4,910.6	13.9	16.1	30.72	-429.2	-639.9	180.1	159.4	20.66	8.718		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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	5,055.2	5,078.3	5,008.8	14.2	16.5	30.70	-439.6	-655.1	184.3	163.2	21.09	8.739		
5,200.0	5,154.1	5,178.2	5,107.0	14.5	16.9	30.68	-449.9	-670.3	188.5	167.0	21.52	8.759		
5,300.0	5,253.0	5,278.2	5,205.2	14.9	17.3	30.65	-460.3	-685.6	192.7	170.8	21.95	8.778		
5,400.0	5,352.0	5,378.1	5,303.4	15.2	17.6	30.63	-470.6	-700.8	196.9	174.5	22.39	8.797		
5,500.0	5,450.9	5,478.0	5,401.6	15.5	18.0	30.61	-480.9	-716.0	201.1	178.3	22.82	8.815		
5,600.0	5,549.8	5,577.9	5,499.8	15.8	18.4	30.59	-491.3	-731.2	205.3	182.1	23.25	8.832		
5,700.0	5,648.7	5,677.8	5,598.0	16.1	18.7	30.57	-501.6	-746.4	209.6	185.9	23.68	8.848		
5,800.0	5,747.6	5,777.7	5,696.2	16.4	19.1	30.55	-511.9	-761.6	213.8	189.7	24.12	8.864		
5,900.0	5,846.6	5,877.6	5,794.4	16.7	19.5	30.53	-522.3	-776.8	218.0	193.4	24.55	8.880		
6,000.0	5,945.5	5,977.5	5,892.6	17.0	19.8	30.52	-532.6	-792.0	222.2	197.2	24.98	8.895		
6,100.0	6,044.4	6,077.4	5,990.9	17.3	20.2	30.50	-542.9	-807.2	226.4	201.0	25.41	8.909		
6,200.0	6,143.3	6,177.4	6,089.1	17.6	20.6	30.48	-553.3	-822.4	230.6	204.8	25.85	8.923		
6,300.0	6,242.2	6,277.3	6,187.3	18.0	20.9	30.47	-563.6	-837.6	234.8	208.6	26.28	8.936		
6,400.0	6,341.1	6,377.2	6,285.5	18.3	21.3	30.45	-573.9	-852.8	239.0	212.3	26.71	8.949		
6,500.0	6,440.1	6,477.1	6,383.7	18.6	21.7	30.44	-584.3	-868.0	243.3	216.1	27.14	8.962		
6,600.0	6,539.0	6,577.0	6,481.9	18.9	22.0	30.43	-594.6	-883.2	247.5	219.9	27.58	8.974		
6,700.0	6,637.9	6,676.9	6,580.1	19.2	22.4	30.41	-604.9	-898.4	251.7	223.7	28.01	8.986		
6,800.0	6,736.8	6,776.8	6,678.3	19.5	22.8	30.40	-615.3	-913.6	255.9	227.5	28.44	8.997		
6,900.0	6,835.7	6,876.7	6,776.5	19.8	23.1	30.39	-625.6	-928.8	260.1	231.2	28.87	9.008		
7,000.0	6,934.6	6,976.6	6,874.7	20.1	23.5	30.37	-636.0	-944.0	264.3	235.0	29.31	9.019		
7,100.0	7,033.6	7,076.8	6,973.1	20.4	23.9	30.36	-646.3	-959.3	268.5	238.8	29.74	9.029		
7,200.0	7,132.5	7,184.1	7,079.1	20.8	24.1	32.56	-646.8	-975.7	271.2	240.5	30.76	8.819		
7,300.0	7,231.4	7,284.5	7,176.6	21.1	24.2	38.29	-629.2	-990.8	273.1	240.3	32.81	8.323		
7,329.8	7,260.9	7,312.3	7,202.9	21.2	24.2	40.47	-621.3	-994.9	274.1	240.6	33.56	8.167		
7,350.0	7,280.9	7,330.7	7,220.1	21.2	24.2	32.36	-615.4	-997.5	275.1	241.0	34.11	8.067		
7,400.0	7,330.5	7,374.8	7,260.6	21.3	24.2	4.63	-598.9	-1,003.8	278.5	243.1	35.36	7.876		
7,450.0	7,380.1	7,417.4	7,298.3	21.4	24.2	-21.08	-580.0	-1,009.6	283.1	246.7	36.46	7.765		
7,500.0	7,429.4	7,458.6	7,333.4	21.5	24.1	-35.17	-559.1	-1,015.0	289.0	251.6	37.37	7.734		
7,550.0	7,478.3	7,500.0	7,367.0	21.5	24.1	-41.43	-535.6	-1,020.3	296.0	258.0	38.06	7.778		
7,600.0	7,526.3	7,537.1	7,395.7	21.5	24.0	-44.10	-512.5	-1,024.7	304.1	265.7	38.44	7.911		
7,650.0	7,573.4	7,574.7	7,423.2	21.5	23.9	-44.71	-487.2	-1,029.0	313.1	274.5	38.59	8.114		
7,700.0	7,619.3	7,611.3	7,448.3	21.4	23.8	-44.31	-460.9	-1,032.8	322.8	284.4	38.46	8.394		
7,750.0	7,663.8	7,650.0	7,473.0	21.4	23.8	-43.17	-431.4	-1,036.7	333.2	295.1	38.09	8.749		
7,800.0	7,706.6	7,681.9	7,491.8	21.3	23.7	-42.10	-405.9	-1,039.6	344.0	306.5	37.44	9.187		
7,850.0	7,747.5	7,716.0	7,510.4	21.2	23.6	-40.70	-377.4	-1,042.5	355.1	318.5	36.59	9.706		
7,900.0	7,786.4	7,750.0	7,527.2	21.1	23.5	-39.21	-347.9	-1,045.1	366.4	330.9	35.54	10.311		
7,950.0	7,823.0	7,782.4	7,541.6	21.1	23.5	-37.77	-319.0	-1,047.3	377.8	343.4	34.31	11.009		
8,000.0	7,857.2	7,814.7	7,554.3	21.0	23.4	-36.34	-289.4	-1,049.3	389.0	356.1	32.96	11.804		
8,050.0	7,888.8	7,850.0	7,566.3	20.9	23.4	-34.83	-256.2	-1,051.1	400.2	368.7	31.49	12.711		
8,100.0	7,917.6	7,877.9	7,574.3	20.8	23.3	-33.64	-229.6	-1,052.4	411.1	381.1	29.99	13.707		
8,150.0	7,943.6	7,900.0	7,579.8	20.8	23.3	-32.67	-208.1	-1,053.2	421.7	393.2	28.51	14.791		
8,200.0	7,966.5	7,939.4	7,587.4	20.7	23.3	-31.23	-169.5	-1,054.4	431.7	404.7	26.97	16.009		
8,250.0	7,986.4	7,969.7	7,591.5	20.7	23.3	-30.13	-139.5	-1,055.0	441.4	415.8	25.56	17.266		
8,300.0	8,003.0	8,000.0	7,594.0	20.7	23.3	-29.09	-109.3	-1,055.4	450.5	426.1	24.31	18.531		
8,350.0	8,016.3	8,033.2	7,595.0	20.8	23.3	-28.05	-76.1	-1,055.6	459.0	435.7	23.25	19.740		
8,400.0	8,026.2	8,075.7	7,595.0	20.9	23.3	-27.00	-33.6	-1,055.6	466.0	443.6	22.44	20.764		
8,450.0	8,032.7	8,125.1	7,595.0	21.0	23.3	-26.15	15.8	-1,055.6	470.4	448.3	22.08	21.303		
8,500.0	8,035.7	8,175.0	7,595.0	21.1	23.4	-25.63	65.6	-1,055.6	471.8	449.7	22.12	21.331		
8,519.1	8,036.0	8,194.1	7,595.0	21.2	23.5	-25.51	84.7	-1,055.6	471.6	449.3	22.25	21.191		
8,600.0	8,036.0	8,274.8	7,595.0	21.5	23.7	-25.05	165.5	-1,055.6	469.8	447.1	22.70	20.694		
8,700.0	8,036.0	8,374.7	7,595.0	22.0	24.1	-24.47	265.4	-1,055.6	467.6	444.3	23.31	20.060		
8,800.0	8,036.0	8,474.5	7,595.0	22.7	24.6	-23.88	365.2	-1,055.6	465.4	441.5	23.97	19.417		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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)				
8,859.1	8,036.0	8,533.6	7,595.0	23.1	25.0	-23.53	424.3	-1,055.6	464.2	439.8	24.38	19.040		
8,900.0	8,036.0	8,574.4	7,595.0	23.4	25.2	-23.29	465.1	-1,055.6	463.3	438.7	24.67	18.783		
9,000.0	8,036.0	8,674.3	7,595.0	24.3	26.0	-22.69	564.9	-1,055.6	461.3	435.9	25.39	18.169		
9,100.0	8,036.0	8,774.1	7,595.0	25.2	26.8	-22.09	664.8	-1,055.6	459.3	433.2	26.12	17.582		
9,200.0	8,036.0	8,874.0	7,595.0	26.3	27.7	-21.49	764.7	-1,055.6	457.4	430.5	26.86	17.028		
9,300.0	8,036.0	8,973.9	7,595.0	27.4	28.7	-20.87	864.5	-1,055.6	455.5	427.9	27.59	16.509		
9,400.0	8,036.0	9,073.7	7,595.0	28.6	29.7	-20.26	964.4	-1,055.6	453.6	425.3	28.31	16.026		
9,500.0	8,036.0	9,173.6	7,595.0	29.8	30.9	-19.64	1,064.3	-1,055.6	451.8	422.8	29.00	15.580		
9,600.0	8,036.0	9,273.4	7,595.0	31.1	32.1	-19.01	1,164.1	-1,055.6	450.1	420.4	29.67	15.169		
9,700.0	8,036.0	9,373.3	7,595.0	32.4	33.3	-18.38	1,264.0	-1,055.6	448.4	418.1	30.31	14.793		
9,800.0	8,036.0	9,473.2	7,595.0	33.8	34.6	-17.74	1,363.8	-1,055.6	446.8	415.9	30.92	14.449		
9,900.0	8,036.0	9,573.0	7,595.0	35.2	35.9	-17.10	1,463.7	-1,055.6	445.2	413.7	31.50	14.136		
10,000.0	8,036.0	9,672.9	7,595.0	36.6	37.2	-16.46	1,563.6	-1,055.6	443.7	411.7	32.03	13.853		
10,100.0	8,036.0	9,772.8	7,595.0	38.1	38.6	-15.81	1,663.4	-1,055.6	442.3	409.7	32.53	13.597		
10,200.0	8,036.0	9,872.6	7,595.0	39.5	40.1	-15.15	1,763.3	-1,055.6	440.9	407.9	32.98	13.367		
10,300.0	8,036.0	9,972.5	7,595.0	41.0	41.5	-14.49	1,863.2	-1,055.6	439.5	406.1	33.39	13.162		
10,359.1	8,036.0	10,031.5	7,595.0	41.9	42.4	-14.10	1,922.2	-1,055.6	438.8	405.1	33.62	13.051		
10,400.0	8,036.0	10,072.3	7,595.0	42.6	43.0	-13.86	1,963.0	-1,055.6	438.3	404.5	33.76	12.981		
10,500.0	8,036.0	10,172.3	7,595.0	44.1	44.4	-13.40	2,063.0	-1,055.6	437.4	403.2	34.19	12.792		
10,600.0	8,036.0	10,272.3	7,595.0	45.6	46.0	-13.16	2,162.9	-1,055.6	437.0	402.2	34.76	12.571		
10,659.1	8,036.0	10,331.4	7,595.0	46.5	46.9	-13.12	2,222.1	-1,055.6	436.9	401.7	35.17	12.424		
10,700.0	8,036.0	10,372.3	7,595.0	47.1	47.5	-13.12	2,262.9	-1,055.6	436.9	401.4	35.49	12.311		
10,800.0	8,036.0	10,472.3	7,595.0	48.7	49.0	-13.12	2,362.9	-1,055.6	436.9	400.6	36.28	12.041		
10,900.0	8,036.0	10,572.3	7,595.0	50.3	50.6	-13.12	2,462.9	-1,055.6	436.9	399.8	37.08	11.782		
11,000.0	8,036.0	10,672.3	7,595.0	51.8	52.1	-13.12	2,562.9	-1,055.6	436.9	399.0	37.88	11.533		
11,100.0	8,036.0	10,772.3	7,595.0	53.4	53.7	-13.12	2,662.9	-1,055.6	436.9	398.2	38.69	11.293		
11,200.0	8,036.0	10,872.3	7,595.0	55.0	55.3	-13.12	2,762.9	-1,055.6	436.9	397.4	39.50	11.062		
11,300.0	8,036.0	10,972.3	7,595.0	56.6	56.9	-13.12	2,862.9	-1,055.6	436.9	396.6	40.31	10.840		
11,400.0	8,036.0	11,072.3	7,595.0	58.3	58.5	-13.12	2,962.9	-1,055.6	436.9	395.8	41.12	10.625		
11,500.0	8,036.0	11,172.3	7,595.0	59.9	60.1	-13.12	3,062.9	-1,055.6	436.9	395.0	41.94	10.418		
11,600.0	8,036.0	11,272.3	7,595.0	61.5	61.7	-13.12	3,162.9	-1,055.6	436.9	394.2	42.76	10.218		
11,700.0	8,036.0	11,372.3	7,595.0	63.1	63.4	-13.12	3,262.9	-1,055.6	436.9	393.3	43.58	10.026		
11,800.0	8,036.0	11,472.3	7,595.0	64.8	65.0	-13.12	3,362.9	-1,055.6	436.9	392.5	44.40	9.839		
11,900.0	8,036.0	11,572.3	7,595.0	66.4	66.7	-13.12	3,462.9	-1,055.6	436.9	391.7	45.23	9.660		
12,000.0	8,036.0	11,672.3	7,595.0	68.1	68.3	-13.12	3,562.9	-1,055.6	436.9	390.9	46.06	9.486		
12,100.0	8,036.0	11,772.3	7,595.0	69.8	70.0	-13.12	3,662.9	-1,055.6	436.9	390.0	46.89	9.318		
12,200.0	8,036.0	11,872.3	7,595.0	71.4	71.6	-13.12	3,762.9	-1,055.6	436.9	389.2	47.72	9.155		
12,300.0	8,036.0	11,972.3	7,595.0	73.1	73.3	-13.12	3,862.9	-1,055.6	436.9	388.4	48.56	8.998		
12,400.0	8,036.0	12,072.3	7,595.0	74.8	74.9	-13.12	3,962.9	-1,055.6	436.9	387.5	49.39	8.846		
12,500.0	8,036.0	12,172.3	7,595.0	76.4	76.6	-13.12	4,062.9	-1,055.6	436.9	386.7	50.23	8.698		
12,559.1	8,036.0	12,231.4	7,595.0	77.4	77.6	-13.12	4,122.1	-1,055.6	436.9	386.2	50.73	8.613		
12,559.1	8,036.0	12,231.4	7,595.0	77.4	77.6	-13.12	4,122.1	-1,055.6	436.9	386.2	50.73	8.613		
12,600.0	8,036.0	12,272.3	7,595.0	78.1	78.3	-13.16	4,162.9	-1,055.6	437.0	385.9	51.07	8.557		
12,700.0	8,036.0	12,372.2	7,595.0	79.8	80.0	-13.55	4,262.9	-1,055.6	437.7	385.3	52.40	8.352		
12,809.1	8,036.0	12,481.1	7,595.0	81.6	81.8	-14.45	4,371.8	-1,055.6	439.5	384.8	54.72	8.033		
12,900.0	8,036.0	12,571.6	7,595.0	83.1	83.3	-15.44	4,462.3	-1,055.6	441.6	384.2	57.38	7.695		
13,000.0	8,036.0	12,671.2	7,595.0	84.7	85.0	-16.52	4,561.9	-1,055.6	444.0	383.5	60.45	7.344		
13,100.0	8,036.0	12,770.9	7,595.0	86.4	86.7	-17.58	4,661.5	-1,055.6	446.5	382.9	63.64	7.016		
13,200.0	8,036.0	12,870.5	7,595.0	88.1	88.4	-18.62	4,761.2	-1,055.6	449.2	382.2	66.95	6.709		
13,300.0	8,036.0	12,970.1	7,595.0	89.8	90.1	-19.64	4,860.8	-1,055.6	452.0	381.6	70.36	6.424		
13,400.0	8,036.0	13,069.8	7,595.0	91.4	91.7	-20.65	4,960.4	-1,055.6	454.9	381.0	73.86	6.159		
13,500.0	8,036.0	13,169.4	7,595.0	93.1	93.4	-21.63	5,060.1	-1,055.6	458.0	380.5	77.46	5.912		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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)				
13,600.0	8,036.0	13,269.0	7,595.0	94.8	95.1	-22.61	5,159.7	-1,055.6	461.2	380.0	81.13	5.684		
13,700.0	8,036.0	13,368.7	7,595.0	96.5	96.8	-23.56	5,259.4	-1,055.6	464.4	379.6	84.87	5.472		
13,800.0	8,036.0	13,468.3	7,595.0	98.2	98.5	-24.49	5,359.0	-1,055.6	467.9	379.2	88.68	5.276		
13,900.0	8,036.0	13,568.0	7,595.0	99.9	100.2	-25.41	5,458.7	-1,055.6	471.4	378.8	92.54	5.094		
14,000.0	8,036.0	13,667.7	7,595.0	101.6	101.9	-26.31	5,558.3	-1,055.6	475.0	378.5	96.45	4.924		
14,100.0	8,036.0	13,767.3	7,595.0	103.2	103.6	-27.19	5,658.0	-1,055.6	478.7	378.3	100.41	4.767		
14,200.0	8,036.0	13,867.0	7,595.0	104.9	105.3	-28.05	5,757.7	-1,055.6	482.5	378.1	104.41	4.621		
14,300.0	8,036.0	13,966.6	7,595.0	106.6	107.0	-28.90	5,857.3	-1,055.6	486.4	378.0	108.44	4.485		
14,400.0	8,036.0	14,066.3	7,595.0	108.3	108.8	-29.73	5,957.0	-1,055.6	490.4	377.9	112.51	4.359		
14,500.0	8,036.0	14,166.0	7,595.0	110.1	110.5	-30.54	6,056.7	-1,055.6	494.4	377.8	116.60	4.240		
14,600.0	8,036.0	14,265.7	7,595.0	111.8	112.2	-31.33	6,156.3	-1,055.6	498.6	377.9	120.71	4.130		
14,700.0	8,036.0	14,365.3	7,595.0	113.5	113.9	-32.11	6,256.0	-1,055.6	502.8	377.9	124.85	4.027		
14,800.0	8,036.0	14,465.0	7,595.0	115.2	115.6	-32.87	6,355.7	-1,055.6	507.1	378.1	129.00	3.931		
14,900.0	8,036.0	14,564.7	7,595.0	116.9	117.3	-33.61	6,455.4	-1,055.6	511.4	378.2	133.17	3.840		
15,009.1	8,036.0	14,673.5	7,595.0	118.8	119.2	-34.40	6,564.2	-1,055.6	516.2	378.5	137.73	3.748		
15,100.0	8,036.0	14,764.2	7,595.0	120.3	120.7	-35.01	6,654.8	-1,055.6	519.9	378.1	141.81	3.666		
15,200.0	8,036.0	14,864.0	7,595.0	122.0	122.5	-35.52	6,754.7	-1,055.6	523.0	377.2	145.81	3.587		
15,300.0	8,036.0	14,963.9	7,595.0	123.8	124.2	-35.86	6,854.6	-1,055.6	525.1	375.8	149.30	3.517		
15,400.0	8,036.0	15,063.9	7,595.0	125.5	125.9	-36.04	6,954.6	-1,055.6	526.2	374.0	152.26	3.456		
15,459.1	8,036.0	15,123.1	7,595.0	126.5	126.9	-36.07	7,013.7	-1,055.6	526.4	372.7	153.74	3.424		
15,470.3	8,036.0	15,134.2	7,595.0	126.7	127.1	-36.07	7,024.9	-1,055.6	526.4	372.4	154.00	3.418		
15,500.0	8,036.0	15,163.9	7,595.0	127.2	127.6	-36.06	7,054.6	-1,055.6	526.4	371.8	154.60	3.405		
15,600.0	8,036.0	15,263.9	7,595.0	129.0	129.4	-36.05	7,154.6	-1,055.6	526.3	369.7	156.61	3.360		
15,700.0	8,036.0	15,363.9	7,595.0	130.7	131.1	-36.03	7,254.6	-1,055.6	526.1	367.5	158.61	3.317		
15,800.0	8,036.0	15,463.9	7,595.0	132.4	132.8	-36.01	7,354.6	-1,055.6	526.0	365.4	160.62	3.275		
15,900.0	8,036.0	15,563.9	7,595.0	134.2	134.5	-36.00	7,454.6	-1,055.6	525.9	363.3	162.62	3.234		
16,000.0	8,036.0	15,663.9	7,595.0	135.9	136.3	-35.98	7,554.6	-1,055.6	525.8	361.2	164.63	3.194		
16,100.0	8,036.0	15,763.9	7,595.0	137.6	138.0	-35.96	7,654.6	-1,055.6	525.7	359.1	166.63	3.155		
16,200.0	8,036.0	15,863.9	7,595.0	139.4	139.7	-35.94	7,754.6	-1,055.6	525.6	356.9	168.63	3.117		
16,300.0	8,036.0	15,963.9	7,595.0	141.1	141.5	-35.93	7,854.6	-1,055.6	525.5	354.8	170.63	3.080		
16,400.0	8,036.0	16,063.9	7,595.0	142.8	143.2	-35.91	7,954.6	-1,055.6	525.3	352.7	172.63	3.043		
16,500.0	8,036.0	16,163.9	7,595.0	144.6	144.9	-35.89	8,054.6	-1,055.6	525.2	350.6	174.63	3.008		
16,600.0	8,036.0	16,263.9	7,595.0	146.3	146.6	-35.88	8,154.6	-1,055.6	525.1	348.5	176.62	2.973		
16,700.0	8,036.0	16,363.9	7,595.0	148.0	148.4	-35.86	8,254.6	-1,055.6	525.0	346.4	178.62	2.939		
16,800.0	8,036.0	16,463.9	7,595.0	149.8	150.1	-35.84	8,354.6	-1,055.6	524.9	344.3	180.61	2.906		
16,900.0	8,036.0	16,563.9	7,595.0	151.5	151.8	-35.82	8,454.6	-1,055.6	524.8	342.2	182.61	2.874		
17,000.0	8,036.0	16,663.9	7,595.0	153.3	153.6	-35.81	8,554.6	-1,055.6	524.7	340.1	184.60	2.842		
17,100.0	8,036.0	16,763.9	7,595.0	155.0	155.3	-35.79	8,654.6	-1,055.6	524.6	338.0	186.59	2.811		
17,104.9	8,036.0	16,768.2	7,595.0	155.1	155.4	-35.79	8,658.9	-1,055.6	524.5	337.9	186.68	2.810 SF		
17,200.0	8,036.0	16,768.2	7,595.0	156.7	155.4	-35.79	8,658.9	-1,055.6	533.1	345.4	187.66	2.841		
17,300.0	8,036.0	16,768.2	7,595.0	158.5	155.4	-35.79	8,658.9	-1,055.6	559.7	371.0	188.69	2.966		
17,400.0	8,036.0	16,768.2	7,595.0	160.2	155.4	-35.79	8,658.9	-1,055.6	601.9	412.2	189.72	3.172		
17,500.0	8,036.0	16,768.2	7,595.0	162.0	155.4	-35.79	8,658.9	-1,055.6	656.7	466.0	190.75	3.443		
17,600.0	8,036.0	16,768.2	7,595.0	163.7	155.4	-35.79	8,658.9	-1,055.6	721.3	529.5	191.78	3.761		
17,700.0	8,036.0	16,768.2	7,595.0	165.4	155.4	-35.79	8,658.9	-1,055.6	793.3	600.5	192.81	4.114		
17,800.0	8,036.0	16,768.2	7,595.0	167.2	155.4	-35.79	8,658.9	-1,055.6	870.8	677.0	193.84	4.493		
17,902.0	8,036.0	16,768.2	7,595.0	169.0	155.4	-35.79	8,658.9	-1,055.6	954.3	759.4	194.89	4.896		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4D-29H-P168 - Hz - Plan #2													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	90.04	0.0	11.2	11.2					
100.0	100.0	100.0	100.0	0.1	0.1	90.04	0.0	11.2	11.2	11.0	0.25	44.889		
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	11.2	11.2	10.6	0.60	18.715		
300.0	300.0	300.0	300.0	0.5	0.5	90.04	0.0	11.2	11.2	10.3	0.95	11.822		
400.0	400.0	400.0	400.0	0.6	0.6	90.04	0.0	11.2	11.2	9.9	1.30	8.639 CC, ES		
500.0	500.0	500.0	500.0	0.8	0.8	-142.00	0.0	11.2	11.9	10.2	1.65	7.217		
600.0	600.0	600.1	600.1	1.0	1.0	-145.58	-0.8	10.8	13.5	11.5	2.00	6.777		
700.0	699.9	700.2	700.2	1.2	1.2	-146.51	-3.2	9.6	15.7	13.3	2.35	6.669		
800.0	799.7	800.3	800.2	1.4	1.4	-145.64	-7.1	7.6	18.3	15.6	2.71	6.741		
900.0	899.4	900.5	900.2	1.6	1.6	-143.69	-12.6	4.8	21.4	18.3	3.09	6.922		
1,000.0	998.9	1,000.6	1,000.0	1.8	1.8	-141.18	-19.7	1.1	25.0	21.5	3.48	7.170		
1,100.0	1,098.3	1,100.8	1,099.6	2.1	2.0	-138.44	-28.3	-3.3	29.1	25.2	3.91	7.453		
1,200.0	1,197.4	1,200.8	1,199.0	2.3	2.2	-135.86	-38.4	-8.5	33.9	29.5	4.36	7.767		
1,243.8	1,240.7	1,244.5	1,242.4	2.4	2.3	-135.31	-42.9	-10.8	36.3	31.8	4.57	7.953		
1,300.0	1,296.3	1,300.6	1,298.2	2.6	2.5	-134.95	-48.8	-13.8	39.6	34.8	4.83	8.197		
1,400.0	1,395.3	1,400.4	1,397.3	2.9	2.7	-134.43	-59.2	-19.1	45.5	40.1	5.31	8.559		
1,500.0	1,494.2	1,500.3	1,496.4	3.2	3.0	-134.04	-69.6	-24.5	51.3	45.5	5.80	8.850		
1,600.0	1,593.1	1,600.1	1,595.6	3.5	3.2	-133.72	-80.0	-29.8	57.1	50.9	6.29	9.088		
1,700.0	1,692.0	1,699.9	1,694.7	3.8	3.5	-133.46	-90.4	-35.2	63.0	56.2	6.78	9.286		
1,800.0	1,790.9	1,799.8	1,793.9	4.1	3.7	-133.25	-100.9	-40.5	68.8	61.6	7.28	9.452		
1,900.0	1,889.9	1,899.6	1,893.0	4.4	4.0	-133.07	-111.3	-45.8	74.7	66.9	7.79	9.593		
2,000.0	1,988.8	1,999.4	1,992.1	4.7	4.2	-132.92	-121.7	-51.2	80.5	72.2	8.29	9.715		
2,100.0	2,087.7	2,099.2	2,091.3	5.0	4.5	-132.78	-132.1	-56.5	86.4	77.6	8.80	9.821		
2,200.0	2,186.6	2,199.1	2,190.4	5.3	4.8	-132.67	-142.5	-61.8	92.2	82.9	9.30	9.913		
2,300.0	2,285.5	2,298.9	2,289.6	5.6	5.0	-132.56	-152.9	-67.2	98.1	88.3	9.81	9.994		
2,400.0	2,384.4	2,398.7	2,388.7	5.9	5.3	-132.47	-163.3	-72.5	103.9	93.6	10.32	10.067		
2,500.0	2,483.4	2,498.6	2,487.8	6.2	5.6	-132.39	-173.7	-77.8	109.8	98.9	10.84	10.131		
2,600.0	2,582.3	2,598.4	2,587.0	6.5	5.8	-132.32	-184.2	-83.2	115.6	104.3	11.35	10.189		
2,700.0	2,681.2	2,698.2	2,686.1	6.8	6.1	-132.25	-194.6	-88.5	121.5	109.6	11.86	10.241		
2,800.0	2,780.1	2,798.0	2,785.3	7.1	6.4	-132.19	-205.0	-93.9	127.3	115.0	12.38	10.288		
2,900.0	2,879.0	2,897.9	2,884.4	7.4	6.6	-132.14	-215.4	-99.2	133.2	120.3	12.89	10.332		
3,000.0	2,977.9	2,997.7	2,983.5	7.7	6.9	-132.09	-225.8	-104.5	139.0	125.6	13.41	10.371		
3,100.0	3,076.9	3,097.5	3,082.7	8.0	7.2	-132.04	-236.2	-109.9	144.9	131.0	13.92	10.407		
3,200.0	3,175.8	3,197.4	3,181.8	8.3	7.4	-132.00	-246.6	-115.2	150.7	136.3	14.44	10.440		
3,300.0	3,274.7	3,297.2	3,281.0	8.7	7.7	-131.96	-257.0	-120.5	156.6	141.6	14.95	10.471		
3,400.0	3,373.6	3,397.0	3,380.1	9.0	7.9	-131.92	-267.4	-125.9	162.4	147.0	15.47	10.500		
3,500.0	3,472.5	3,496.8	3,479.3	9.3	8.2	-131.89	-277.9	-131.2	168.3	152.3	15.99	10.526		
3,600.0	3,571.4	3,596.7	3,578.4	9.6	8.5	-131.86	-288.3	-136.6	174.1	157.6	16.51	10.551		
3,700.0	3,670.4	3,696.5	3,677.5	9.9	8.7	-131.83	-298.7	-141.9	180.0	163.0	17.02	10.573		
3,800.0	3,769.3	3,796.3	3,776.7	10.2	9.0	-131.80	-309.1	-147.2	185.8	168.3	17.54	10.595		
3,900.0	3,868.2	3,896.2	3,875.8	10.5	9.3	-131.77	-319.5	-152.6	191.7	173.6	18.06	10.615		
4,000.0	3,967.1	3,996.0	3,975.0	10.8	9.6	-131.75	-329.9	-157.9	197.6	179.0	18.58	10.634		
4,100.0	4,066.0	4,095.8	4,074.1	11.1	9.8	-131.73	-340.3	-163.2	203.4	184.3	19.10	10.652		
4,200.0	4,165.0	4,195.6	4,173.2	11.4	10.1	-131.71	-350.7	-168.6	209.3	189.6	19.61	10.668		
4,300.0	4,263.9	4,295.5	4,272.4	11.8	10.4	-131.68	-361.2	-173.9	215.1	195.0	20.13	10.684		
4,400.0	4,362.8	4,395.3	4,371.5	12.1	10.6	-131.67	-371.6	-179.3	221.0	200.3	20.65	10.699		
4,500.0	4,461.7	4,495.1	4,470.7	12.4	10.9	-131.65	-382.0	-184.6	226.8	205.6	21.17	10.713		
4,600.0	4,560.6	4,595.0	4,569.8	12.7	11.2	-131.63	-392.4	-189.9	232.7	211.0	21.69	10.726		
4,700.0	4,659.5	4,694.8	4,668.9	13.0	11.4	-131.61	-402.8	-195.3	238.5	216.3	22.21	10.739		
4,800.0	4,758.5	4,794.6	4,768.1	13.3	11.7	-131.60	-413.2	-200.6	244.4	221.6	22.73	10.751		
4,900.0	4,857.4	4,894.4	4,867.2	13.6	12.0	-131.58	-423.6	-205.9	250.2	227.0	23.25	10.763		
5,000.0	4,956.3	4,994.3	4,966.4	13.9	12.2	-131.57	-434.0	-211.3	256.1	232.3	23.77	10.774		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4D-29H-P168 - Hz - Plan #2													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	5,055.2	5,094.1	5,065.5	14.2	12.5	-131.55	-444.4	-216.6	261.9	237.6	24.29	10.784		
5,200.0	5,154.1	5,193.9	5,164.6	14.5	12.8	-131.54	-454.9	-221.9	267.8	243.0	24.81	10.794		
5,300.0	5,253.0	5,293.8	5,263.8	14.9	13.0	-131.53	-465.3	-227.3	273.6	248.3	25.33	10.804		
5,400.0	5,352.0	5,393.6	5,362.9	15.2	13.3	-131.52	-475.7	-232.6	279.5	253.6	25.85	10.813		
5,500.0	5,450.9	5,493.4	5,462.1	15.5	13.6	-131.50	-486.1	-238.0	285.3	259.0	26.37	10.822		
5,600.0	5,549.8	5,593.2	5,561.2	15.8	13.8	-131.49	-496.5	-243.3	291.2	264.3	26.89	10.830		
5,700.0	5,648.7	5,693.1	5,660.3	16.1	14.1	-131.48	-506.9	-248.6	297.0	269.6	27.41	10.838		
5,800.0	5,747.6	5,792.9	5,759.5	16.4	14.4	-131.47	-517.3	-254.0	302.9	275.0	27.93	10.846		
5,900.0	5,846.6	5,892.7	5,858.6	16.7	14.6	-131.46	-527.7	-259.3	308.7	280.3	28.45	10.853		
6,000.0	5,945.5	5,992.6	5,957.8	17.0	14.9	-131.45	-538.2	-264.6	314.6	285.6	28.97	10.860		
6,100.0	6,044.4	6,092.4	6,056.9	17.3	15.2	-131.44	-548.6	-270.0	320.4	291.0	29.49	10.867		
6,200.0	6,143.3	6,192.2	6,156.0	17.6	15.4	-131.43	-559.0	-275.3	326.3	296.3	30.01	10.874		
6,300.0	6,242.2	6,292.0	6,255.2	18.0	15.7	-131.43	-569.4	-280.7	332.1	301.6	30.53	10.880		
6,400.0	6,341.1	6,391.9	6,354.3	18.3	16.0	-131.42	-579.8	-286.0	338.0	307.0	31.05	10.886		
6,500.0	6,440.1	6,491.7	6,453.5	18.6	16.2	-131.41	-590.2	-291.3	343.9	312.3	31.57	10.892		
6,600.0	6,539.0	6,591.5	6,552.6	18.9	16.5	-131.40	-600.6	-296.7	349.7	317.6	32.09	10.898		
6,700.0	6,637.9	6,691.4	6,651.8	19.2	16.8	-131.39	-611.0	-302.0	355.6	322.9	32.61	10.903		
6,800.0	6,736.8	6,791.2	6,750.9	19.5	17.0	-131.39	-621.4	-307.3	361.4	328.3	33.13	10.909		
6,900.0	6,835.7	6,894.4	6,853.5	19.8	17.3	-131.63	-630.6	-312.9	367.1	333.5	33.57	10.933		
7,000.0	6,934.6	6,999.6	6,958.4	20.1	17.4	-133.89	-626.7	-318.5	371.3	337.8	33.47	11.094		
7,100.0	7,033.6	7,098.8	7,055.8	20.4	17.3	-138.07	-609.0	-323.8	375.5	342.7	32.78	11.455		
7,200.0	7,132.5	7,189.1	7,141.6	20.8	17.1	-143.47	-581.4	-328.4	382.4	350.8	31.66	12.079		
7,300.0	7,231.4	7,269.2	7,214.2	21.1	16.9	-149.34	-548.0	-332.3	395.4	365.0	30.38	13.016		
7,329.8	7,260.9	7,291.0	7,233.3	21.2	16.8	-151.08	-537.5	-333.3	400.9	370.9	30.01	13.360		
7,350.0	7,280.9	7,305.5	7,245.8	21.2	16.8	-162.28	-530.2	-334.0	405.0	375.3	29.69	13.640		
7,400.0	7,330.5	7,340.7	7,275.6	21.3	16.6	162.46	-511.4	-335.6	416.4	387.4	28.95	14.384		
7,450.0	7,380.1	7,375.3	7,303.9	21.4	16.5	129.44	-491.6	-337.1	429.1	400.8	28.28	15.172		
7,500.0	7,429.4	7,409.3	7,330.7	21.5	16.4	108.31	-470.8	-338.6	442.9	415.1	27.72	15.979		
7,550.0	7,478.3	7,442.9	7,356.2	21.5	16.2	95.21	-449.0	-339.9	457.4	430.2	27.25	16.784		
7,600.0	7,526.3	7,475.9	7,380.3	21.5	16.1	86.30	-426.4	-341.2	472.5	445.6	26.89	17.573		
7,650.0	7,573.4	7,508.6	7,403.1	21.5	16.0	79.70	-403.0	-342.4	487.8	461.2	26.60	18.340		
7,700.0	7,619.3	7,541.0	7,424.6	21.4	15.8	74.51	-378.9	-343.6	503.2	476.9	26.37	19.082		
7,750.0	7,663.8	7,573.0	7,444.8	21.4	15.7	70.27	-354.0	-344.7	518.5	492.4	26.19	19.802		
7,800.0	7,706.6	7,600.0	7,460.9	21.3	15.6	66.86	-332.4	-345.6	533.6	507.6	26.02	20.509		
7,850.0	7,747.5	7,636.3	7,481.3	21.2	15.5	63.70	-302.4	-346.7	548.2	522.4	25.86	21.204		
7,900.0	7,786.4	7,667.6	7,497.6	21.1	15.4	61.10	-275.7	-347.5	562.4	536.7	25.69	21.892		
7,950.0	7,823.0	7,700.0	7,513.3	21.1	15.3	58.83	-247.3	-348.4	575.9	550.4	25.50	22.580		
8,000.0	7,857.2	7,729.7	7,526.5	21.0	15.3	56.91	-220.8	-349.1	588.7	563.4	25.32	23.255		
8,050.0	7,888.8	7,760.5	7,539.0	20.9	15.2	55.22	-192.6	-349.8	600.7	575.6	25.11	23.924		
8,100.0	7,917.6	7,800.0	7,553.3	20.8	15.2	53.67	-155.8	-350.5	612.0	587.1	24.91	24.568		
8,150.0	7,943.6	7,821.7	7,560.3	20.8	15.1	52.54	-135.2	-350.9	622.2	597.5	24.69	25.195		
8,200.0	7,966.5	7,850.0	7,568.5	20.7	15.1	51.50	-108.2	-351.3	631.5	607.0	24.48	25.792		
8,250.0	7,986.4	7,882.6	7,576.5	20.7	15.1	50.61	-76.6	-351.8	639.8	615.5	24.33	26.302		
8,300.0	8,003.0	7,913.0	7,582.7	20.7	15.2	49.90	-46.9	-352.1	647.1	622.9	24.20	26.739		
8,350.0	8,016.3	7,950.0	7,588.6	20.8	15.2	49.33	-10.3	-352.4	653.4	629.3	24.10	27.111		
8,400.0	8,026.2	7,973.5	7,591.4	20.9	15.3	48.93	13.0	-352.6	658.5	634.4	24.03	27.398		
8,450.0	8,032.7	8,000.0	7,593.5	21.0	15.3	48.66	39.4	-352.7	662.5	638.5	24.04	27.564		
8,500.0	8,035.7	8,033.9	7,594.9	21.1	15.5	48.53	73.3	-352.8	665.4	641.3	24.14	27.570		
8,519.1	8,036.0	8,045.8	7,595.0	21.2	15.5	48.52	85.1	-352.8	666.3	642.1	24.19	27.548		
8,600.0	8,036.0	8,126.1	7,595.0	21.5	15.8	48.76	165.5	-352.8	669.4	644.5	24.98	26.799		
8,700.0	8,036.0	8,226.0	7,595.0	22.0	16.5	49.05	265.4	-352.8	673.4	647.2	26.17	25.731		
8,800.0	8,036.0	8,325.8	7,595.0	22.7	17.2	49.34	365.2	-352.8	677.4	649.8	27.58	24.560		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4D-29H-P168 - Hz - Plan #2													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				
8,859.1	8,036.0	8,384.9	7,595.0	23.1	17.7	49.51	424.3	-352.8	679.7	651.2	28.50	23.846				
8,900.0	8,036.0	8,425.7	7,595.0	23.4	18.1	49.63	465.1	-352.8	681.3	652.2	29.18	23.347				
9,000.0	8,036.0	8,525.6	7,595.0	24.3	19.1	49.91	564.9	-352.8	685.3	654.4	30.95	22.140				
9,100.0	8,036.0	8,625.4	7,595.0	25.2	20.2	50.19	664.8	-352.8	689.3	656.5	32.87	20.969				
9,200.0	8,036.0	8,725.3	7,595.0	26.3	21.4	50.47	764.7	-352.8	693.4	658.5	34.92	19.856				
9,300.0	8,036.0	8,825.2	7,595.0	27.4	22.7	50.74	864.5	-352.8	697.4	660.3	37.08	18.810				
9,400.0	8,036.0	8,925.0	7,595.0	28.6	24.1	51.01	964.4	-352.8	701.5	662.2	39.33	17.836				
9,500.0	8,036.0	9,024.9	7,595.0	29.8	25.4	51.28	1,064.3	-352.8	705.6	663.9	41.67	16.934				
9,600.0	8,036.0	9,124.7	7,595.0	31.1	26.9	51.54	1,164.1	-352.8	709.7	665.6	44.08	16.101				
9,700.0	8,036.0	9,224.6	7,595.0	32.4	28.3	51.80	1,264.0	-352.8	713.8	667.2	46.55	15.333				
9,800.0	8,036.0	9,324.5	7,595.0	33.8	29.8	52.06	1,363.8	-352.8	717.9	668.8	49.09	14.625				
9,900.0	8,036.0	9,424.3	7,595.0	35.2	31.3	52.32	1,463.7	-352.8	722.0	670.4	51.67	13.973				
10,000.0	8,036.0	9,524.2	7,595.0	36.6	32.9	52.57	1,563.6	-352.8	726.2	671.9	54.30	13.372				
10,100.0	8,036.0	9,624.1	7,595.0	38.1	34.5	52.82	1,663.4	-352.8	730.3	673.4	56.98	12.818				
10,200.0	8,036.0	9,723.9	7,595.0	39.5	36.0	53.06	1,763.3	-352.8	734.5	674.8	59.69	12.305				
10,300.0	8,036.0	9,823.8	7,595.0	41.0	37.6	53.31	1,863.2	-352.8	738.7	676.3	62.44	11.830				
10,359.1	8,036.0	9,882.8	7,595.0	41.9	38.6	53.45	1,922.2	-352.8	741.2	677.1	64.09	11.566				
10,400.0	8,036.0	9,923.7	7,595.0	42.6	39.2	53.55	1,963.0	-352.8	742.8	677.7	65.12	11.406				
10,500.0	8,036.0	10,023.6	7,595.0	44.1	40.9	53.74	2,063.0	-352.8	745.7	678.1	67.63	11.027				
10,600.0	8,036.0	10,123.6	7,595.0	45.6	42.5	53.83	2,162.9	-352.8	747.3	677.2	70.07	10.665				
10,659.1	8,036.0	10,182.7	7,595.0	46.5	43.5	53.85	2,222.1	-352.8	747.5	676.0	71.48	10.457				
10,700.0	8,036.0	10,223.6	7,595.0	47.1	44.1	53.85	2,262.9	-352.8	747.5	674.9	72.58	10.300				
10,800.0	8,036.0	10,323.6	7,595.0	48.7	45.8	53.85	2,362.9	-352.8	747.5	672.3	75.26	9.932				
10,900.0	8,036.0	10,423.6	7,595.0	50.3	47.4	53.85	2,462.9	-352.8	747.5	669.6	77.96	9.589				
11,000.0	8,036.0	10,523.6	7,595.0	51.8	49.1	53.85	2,562.9	-352.8	747.5	666.9	80.66	9.267				
11,100.0	8,036.0	10,623.6	7,595.0	53.4	50.8	53.85	2,662.9	-352.8	747.5	664.1	83.38	8.965				
11,200.0	8,036.0	10,723.6	7,595.0	55.0	52.5	53.85	2,762.9	-352.8	747.5	661.4	86.10	8.682				
11,300.0	8,036.0	10,823.6	7,595.0	56.6	54.1	53.85	2,862.9	-352.8	747.5	658.7	88.83	8.415				
11,400.0	8,036.0	10,923.6	7,595.0	58.3	55.8	53.85	2,962.9	-352.8	747.5	655.9	91.57	8.163				
11,500.0	8,036.0	11,023.6	7,595.0	59.9	57.5	53.85	3,062.9	-352.8	747.5	653.2	94.32	7.926				
11,600.0	8,036.0	11,123.6	7,595.0	61.5	59.2	53.85	3,162.9	-352.8	747.5	650.5	97.07	7.701				
11,700.0	8,036.0	11,223.6	7,595.0	63.1	60.9	53.85	3,262.9	-352.8	747.5	647.7	99.82	7.489				
11,800.0	8,036.0	11,323.6	7,595.0	64.8	62.6	53.85	3,362.9	-352.8	747.5	644.9	102.58	7.287				
11,900.0	8,036.0	11,423.6	7,595.0	66.4	64.3	53.85	3,462.9	-352.8	747.5	642.2	105.34	7.096				
12,000.0	8,036.0	11,523.6	7,595.0	68.1	66.0	53.85	3,562.9	-352.8	747.5	639.4	108.11	6.914				
12,100.0	8,036.0	11,623.6	7,595.0	69.8	67.7	53.85	3,662.9	-352.8	747.5	636.6	110.88	6.742				
12,200.0	8,036.0	11,723.6	7,595.0	71.4	69.4	53.85	3,762.9	-352.8	747.5	633.9	113.66	6.577				
12,300.0	8,036.0	11,823.6	7,595.0	73.1	71.2	53.85	3,862.9	-352.8	747.5	631.1	116.44	6.420				
12,400.0	8,036.0	11,923.6	7,595.0	74.8	72.9	53.85	3,962.9	-352.8	747.5	628.3	119.22	6.270				
12,500.0	8,036.0	12,023.6	7,595.0	76.4	74.6	53.85	4,062.9	-352.8	747.5	625.5	122.00	6.127				
12,559.1	8,036.0	12,082.7	7,595.0	77.4	75.6	53.85	4,122.1	-352.8	747.5	623.9	123.65	6.045				
12,600.0	8,036.0	12,123.6	7,595.0	78.1	76.3	53.83	4,162.9	-352.8	747.3	622.8	124.49	6.003				
12,700.0	8,036.0	12,223.5	7,595.0	79.8	78.0	53.66	4,262.9	-352.8	744.7	618.5	126.24	5.899				
12,809.1	8,036.0	12,323.4	7,595.0	81.6	79.9	53.24	4,371.8	-352.8	738.7	611.1	127.63	5.788				
12,900.0	8,036.0	12,422.9	7,595.0	83.1	81.5	52.87	4,462.3	-352.8	732.4	602.8	129.58	5.652				
13,000.0	8,036.0	12,522.5	7,595.0	84.7	83.2	52.46	4,561.9	-352.8	725.5	593.8	131.68	5.510				
13,100.0	8,036.0	12,622.2	7,595.0	86.4	84.9	52.05	4,661.5	-352.8	718.7	585.0	133.74	5.374				
13,200.0	8,036.0	12,721.8	7,595.0	88.1	86.6	51.62	4,761.2	-352.8	711.9	576.2	135.75	5.244				
13,300.0	8,036.0	12,821.4	7,595.0	89.8	88.3	51.19	4,860.8	-352.8	705.3	567.5	137.72	5.121				
13,400.0	8,036.0	12,921.1	7,595.0	91.4	90.1	50.76	4,960.4	-352.8	698.6	559.0	139.64	5.003				
13,500.0	8,036.0	13,020.7	7,595.0	93.1	91.8	50.32	5,060.1	-352.8	692.1	550.6	141.50	4.891				
13,600.0	8,036.0	13,120.3	7,595.0	94.8	93.5	49.87	5,159.7	-352.8	685.6	542.3	143.32	4.784				

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4D-29H-P168 - Hz - Plan #2													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		
13,700.0	8,036.0	13,220.0	7,595.0	96.5	95.2	49.41	5,259.4	-352.8	679.2	534.1	145.08	4.682		
13,800.0	8,036.0	13,319.6	7,595.0	98.2	97.0	48.95	5,359.0	-352.8	672.9	526.1	146.79	4.584		
13,900.0	8,036.0	13,419.3	7,595.0	99.9	98.7	48.49	5,458.7	-352.8	666.7	518.2	148.44	4.491		
14,000.0	8,036.0	13,519.0	7,595.0	101.6	100.4	48.01	5,558.3	-352.8	660.5	510.4	150.03	4.402		
14,100.0	8,036.0	13,618.6	7,595.0	103.2	102.1	47.53	5,658.0	-352.8	654.4	502.8	151.56	4.318		
14,200.0	8,036.0	13,718.3	7,595.0	104.9	103.9	47.05	5,757.7	-352.8	648.4	495.3	153.03	4.237		
14,300.0	8,036.0	13,817.9	7,595.0	106.6	105.6	46.55	5,857.3	-352.8	642.4	488.0	154.44	4.160		
14,400.0	8,036.0	13,917.6	7,595.0	108.3	107.3	46.05	5,957.0	-352.8	636.5	480.8	155.78	4.086		
14,500.0	8,036.0	14,017.3	7,595.0	110.1	109.1	45.55	6,056.7	-352.8	630.7	473.7	157.06	4.016		
14,600.0	8,036.0	14,117.0	7,595.0	111.8	110.8	45.03	6,156.3	-352.8	625.0	466.8	158.26	3.949		
14,700.0	8,036.0	14,216.6	7,595.0	113.5	112.5	44.51	6,256.0	-352.8	619.4	460.0	159.39	3.886		
14,800.0	8,036.0	14,316.3	7,595.0	115.2	114.3	43.99	6,355.7	-352.8	613.8	453.4	160.45	3.826		
14,900.0	8,036.0	14,416.0	7,595.0	116.9	116.0	43.45	6,455.4	-352.8	608.4	446.9	161.44	3.768		
15,009.1	8,036.0	14,524.8	7,595.0	118.8	117.9	42.86	6,564.2	-352.8	602.5	440.1	162.43	3.709		
15,100.0	8,036.0	14,615.5	7,595.0	120.3	119.5	42.44	6,654.8	-352.8	598.1	434.3	163.79	3.652		
15,200.0	8,036.0	14,715.3	7,595.0	122.0	121.2	42.09	6,754.7	-352.8	594.5	429.0	165.50	3.592		
15,300.0	8,036.0	14,815.2	7,595.0	123.8	122.9	41.84	6,854.6	-352.8	592.1	424.6	167.46	3.536		
15,400.0	8,036.0	14,915.2	7,595.0	125.5	124.7	41.71	6,954.6	-352.8	590.8	421.1	169.69	3.482		
15,459.1	8,036.0	14,974.4	7,595.0	126.5	125.7	41.69	7,013.7	-352.8	590.6	419.4	171.16	3.451		
15,459.1	8,036.0	14,974.4	7,595.0	126.5	125.7	41.69	7,013.7	-352.8	590.6	419.4	171.16	3.451		
15,470.3	8,036.0	14,985.5	7,595.0	126.7	125.9	41.69	7,024.9	-352.8	590.6	419.2	171.45	3.445		
15,500.0	8,036.0	15,015.2	7,595.0	127.2	126.4	41.70	7,054.6	-352.8	590.6	418.5	172.15	3.431		
15,600.0	8,036.0	15,115.2	7,595.0	129.0	128.2	41.71	7,154.6	-352.8	590.8	416.2	174.53	3.385		
15,700.0	8,036.0	15,215.2	7,595.0	130.7	129.9	41.73	7,254.6	-352.8	590.9	414.0	176.91	3.340		
15,800.0	8,036.0	15,315.2	7,595.0	132.4	131.6	41.74	7,354.6	-352.8	591.0	411.7	179.29	3.297		
15,900.0	8,036.0	15,415.2	7,595.0	134.2	133.4	41.76	7,454.6	-352.8	591.2	409.5	181.67	3.254		
16,000.0	8,036.0	15,515.2	7,595.0	135.9	135.1	41.77	7,554.6	-352.8	591.3	407.2	184.05	3.213		
16,100.0	8,036.0	15,615.2	7,595.0	137.6	136.9	41.78	7,654.6	-352.8	591.4	405.0	186.44	3.172		
16,200.0	8,036.0	15,715.2	7,595.0	139.4	138.6	41.80	7,754.6	-352.8	591.5	402.7	188.82	3.133		
16,300.0	8,036.0	15,815.2	7,595.0	141.1	140.4	41.81	7,854.6	-352.8	591.7	400.5	191.21	3.094		
16,400.0	8,036.0	15,915.2	7,595.0	142.8	142.1	41.83	7,954.6	-352.8	591.8	398.2	193.60	3.057		
16,500.0	8,036.0	16,015.2	7,595.0	144.6	143.8	41.84	8,054.6	-352.8	591.9	395.9	195.99	3.020		
16,600.0	8,036.0	16,115.2	7,595.0	146.3	145.6	41.85	8,154.6	-352.8	592.1	393.7	198.38	2.984		
16,700.0	8,036.0	16,215.2	7,595.0	148.0	147.3	41.87	8,254.6	-352.8	592.2	391.4	200.78	2.949		
16,800.0	8,036.0	16,315.2	7,595.0	149.8	149.1	41.88	8,354.6	-352.8	592.3	389.1	203.17	2.915		
16,900.0	8,036.0	16,415.2	7,595.0	151.5	150.8	41.90	8,454.6	-352.8	592.4	386.9	205.57	2.882		
17,000.0	8,036.0	16,515.2	7,595.0	153.3	152.6	41.91	8,554.6	-352.8	592.6	384.6	207.97	2.849		
17,100.0	8,036.0	16,615.2	7,595.0	155.0	154.3	41.92	8,654.6	-352.8	592.7	382.3	210.37	2.817		
17,200.0	8,036.0	16,715.2	7,595.0	156.7	156.1	41.94	8,754.6	-352.8	592.8	380.1	212.77	2.786		
17,300.0	8,036.0	16,815.2	7,595.0	158.5	157.8	41.95	8,854.6	-352.8	593.0	377.8	215.18	2.756 SF		
17,400.0	8,036.0	16,830.8	7,595.0	160.2	158.1	41.95	8,870.1	-352.8	599.1	382.5	216.54	2.767		
17,500.0	8,036.0	16,830.8	7,595.0	162.0	158.1	41.95	8,870.1	-352.8	621.2	403.5	217.72	2.853		
17,600.0	8,036.0	16,830.8	7,595.0	163.7	158.1	41.95	8,870.1	-352.8	658.0	439.1	218.89	3.006		
17,700.0	8,036.0	16,830.8	7,595.0	165.4	158.1	41.95	8,870.1	-352.8	707.1	487.1	220.07	3.213		
17,800.0	8,036.0	16,830.8	7,595.0	167.2	158.1	41.95	8,870.1	-352.8	766.2	545.0	221.24	3.463		
17,902.0	8,036.0	16,830.8	7,595.0	169.0	158.1	41.95	8,870.1	-352.8	834.6	612.1	222.44	3.752		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4E-29H-P168 - Hz - Plan #3													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	19.6	19.6					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	19.6	19.6	19.4	0.25	78.555		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	19.6	19.6	19.0	0.60	32.750		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	19.6	19.6	18.7	0.95	20.688		
400.0	400.0	400.0	400.0	0.6	0.6	90.05	0.0	19.6	19.6	18.3	1.30	15.119	CC, ES	
500.0	500.0	500.0	500.0	0.8	0.8	-140.85	0.0	19.6	20.3	18.6	1.65	12.318		
600.0	600.0	600.0	600.0	1.0	1.0	-145.08	0.0	19.6	22.4	20.4	2.00	11.207		
700.0	699.9	699.9	699.9	1.2	1.2	-150.56	0.0	19.6	26.1	23.7	2.35	11.110		
800.0	799.7	799.7	799.7	1.4	1.3	-155.99	0.0	19.6	31.5	28.8	2.70	11.696		
900.0	899.4	899.4	899.4	1.6	1.5	-160.68	0.0	19.6	38.8	35.8	3.04	12.758		
1,000.0	998.9	998.9	998.9	1.8	1.7	-164.45	0.0	19.6	48.0	44.6	3.39	14.155		
1,100.0	1,098.3	1,098.3	1,098.3	2.1	1.9	-167.37	0.0	19.6	59.0	55.2	3.73	15.792		
1,200.0	1,197.4	1,197.4	1,197.4	2.3	2.0	-169.63	0.0	19.6	71.8	67.7	4.08	17.605		
1,243.8	1,240.7	1,240.7	1,240.7	2.4	2.1	-170.45	0.0	19.6	77.9	73.7	4.23	18.443		
1,300.0	1,296.3	1,296.3	1,296.3	2.6	2.2	-171.36	0.0	19.6	86.1	81.7	4.42	19.474		
1,400.0	1,395.3	1,395.3	1,395.3	2.9	2.4	-172.61	0.0	19.6	100.6	95.8	4.77	21.108		
1,500.0	1,494.2	1,494.2	1,494.2	3.2	2.6	-173.55	0.0	19.6	115.2	110.1	5.11	22.529		
1,600.0	1,593.1	1,593.1	1,593.1	3.5	2.7	-174.28	0.0	19.6	129.8	124.3	5.46	23.773		
1,700.0	1,692.0	1,692.0	1,692.0	3.8	2.9	-174.86	0.0	19.6	144.4	138.6	5.81	24.872		
1,800.0	1,790.9	1,790.9	1,790.9	4.1	3.1	-175.33	0.0	19.6	159.0	152.9	6.15	25.849		
1,900.0	1,889.9	1,889.9	1,889.9	4.4	3.2	-175.73	0.0	19.6	173.6	167.1	6.50	26.723		
2,000.0	1,988.8	1,988.8	1,988.8	4.7	3.4	-176.06	0.0	19.6	188.3	181.4	6.84	27.510		
2,100.0	2,087.7	2,088.5	2,088.5	5.0	3.6	-176.16	-0.7	19.9	202.7	195.5	7.19	28.187		
2,200.0	2,186.6	2,188.5	2,188.5	5.3	3.8	-175.80	-2.9	20.7	216.7	209.2	7.54	28.729		
2,300.0	2,285.5	2,288.6	2,288.5	5.6	3.9	-175.06	-6.8	22.2	230.3	222.4	7.90	29.150		
2,400.0	2,384.4	2,388.6	2,388.3	5.9	4.1	-174.00	-12.3	24.4	243.5	235.2	8.26	29.463		
2,500.0	2,483.4	2,488.6	2,488.0	6.2	4.3	-172.67	-19.4	27.1	256.3	247.7	8.64	29.677		
2,600.0	2,582.3	2,588.5	2,587.4	6.5	4.5	-171.11	-28.2	30.5	269.0	260.0	9.03	29.801		
2,700.0	2,681.2	2,688.1	2,686.5	6.8	4.7	-169.34	-38.5	34.5	281.6	272.2	9.44	29.841		
2,800.0	2,780.1	2,787.6	2,785.1	7.1	4.9	-167.39	-50.4	39.1	294.2	284.3	9.87	29.809		
2,900.0	2,879.0	2,886.2	2,882.8	7.4	5.2	-165.45	-63.0	44.0	307.0	296.7	10.32	29.752		
3,000.0	2,977.9	2,984.9	2,980.5	7.7	5.4	-163.67	-75.7	48.9	320.2	309.4	10.78	29.694		
3,100.0	3,076.9	3,083.5	3,078.2	8.0	5.6	-162.02	-88.3	53.8	333.6	322.3	11.26	29.637		
3,200.0	3,175.8	3,182.2	3,176.0	8.3	5.9	-160.51	-100.9	58.7	347.3	335.5	11.74	29.581		
3,300.0	3,274.7	3,280.8	3,273.7	8.7	6.1	-159.11	-113.5	63.6	361.2	348.9	12.23	29.529		
3,400.0	3,373.6	3,379.5	3,371.4	9.0	6.4	-157.81	-126.1	68.5	375.3	362.5	12.73	29.481		
3,500.0	3,472.5	3,478.1	3,469.1	9.3	6.6	-156.61	-138.8	73.4	389.6	376.3	13.23	29.437		
3,600.0	3,571.4	3,576.8	3,566.9	9.6	6.9	-155.49	-151.4	78.3	404.0	390.2	13.74	29.397		
3,700.0	3,670.4	3,675.5	3,664.6	9.9	7.1	-154.45	-164.0	83.1	418.6	404.3	14.26	29.362		
3,800.0	3,769.3	3,774.1	3,762.3	10.2	7.4	-153.48	-176.6	88.0	433.3	418.5	14.77	29.331		
3,900.0	3,868.2	3,872.8	3,860.0	10.5	7.6	-152.58	-189.2	92.9	448.1	432.8	15.29	29.304		
4,000.0	3,967.1	3,971.4	3,957.7	10.8	7.9	-151.73	-201.9	97.8	463.0	447.2	15.81	29.282		
4,100.0	4,066.0	4,070.1	4,055.5	11.1	8.2	-150.93	-214.5	102.7	478.0	461.7	16.33	29.262		
4,200.0	4,165.0	4,168.7	4,153.2	11.4	8.4	-150.19	-227.1	107.6	493.1	476.2	16.86	29.247		
4,300.0	4,263.9	4,267.4	4,250.9	11.8	8.7	-149.48	-239.7	112.5	508.3	490.9	17.39	29.234		
4,400.0	4,362.8	4,366.0	4,348.6	12.1	9.0	-148.82	-252.3	117.4	523.5	505.6	17.91	29.224		
4,500.0	4,461.7	4,464.7	4,446.4	12.4	9.3	-148.20	-265.0	122.3	538.8	520.4	18.44	29.216		
4,600.0	4,560.6	4,563.3	4,544.1	12.7	9.5	-147.60	-277.6	127.2	554.2	535.2	18.97	29.211		
4,700.0	4,659.5	4,662.0	4,641.8	13.0	9.8	-147.05	-290.2	132.0	569.6	550.1	19.50	29.208		
4,800.0	4,758.5	4,760.7	4,739.5	13.3	10.1	-146.52	-302.8	136.9	585.1	565.0	20.03	29.207		
4,900.0	4,857.4	4,859.3	4,837.2	13.6	10.4	-146.01	-315.5	141.8	600.6	580.0	20.56	29.207		
5,000.0	4,956.3	4,958.0	4,935.0	13.9	10.6	-145.54	-328.1	146.7	616.1	595.1	21.09	29.209		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4E-29H-P168 - Hz - Plan #3													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	
5,100.0	5,055.2	5,056.6	5,032.7	14.2	10.9	-145.08	-340.7	151.6	631.7	610.1	21.63	29.212		
5,200.0	5,154.1	5,155.3	5,130.4	14.5	11.2	-144.65	-353.3	156.5	647.4	625.2	22.16	29.216		
5,300.0	5,253.0	5,253.9	5,228.1	14.9	11.5	-144.24	-365.9	161.4	663.1	640.4	22.69	29.221		
5,400.0	5,352.0	5,352.6	5,325.9	15.2	11.8	-143.85	-378.6	166.3	678.8	655.5	23.22	29.227		
5,500.0	5,450.9	5,451.2	5,423.6	15.5	12.0	-143.48	-391.2	171.2	694.5	670.7	23.76	29.234		
5,600.0	5,549.8	5,549.9	5,521.3	15.8	12.3	-143.12	-403.8	176.1	710.3	686.0	24.29	29.241		
5,700.0	5,648.7	5,648.6	5,619.0	16.1	12.6	-142.78	-416.4	181.0	726.0	701.2	24.82	29.250		
5,800.0	5,747.6	5,747.2	5,716.7	16.4	12.9	-142.45	-429.0	185.8	741.9	716.5	25.36	29.258		
5,900.0	5,846.6	5,845.9	5,814.5	16.7	13.2	-142.13	-441.7	190.7	757.7	731.8	25.89	29.267		
6,000.0	5,945.5	5,944.5	5,912.2	17.0	13.5	-141.83	-454.3	195.6	773.5	747.1	26.42	29.277		
6,100.0	6,044.4	6,043.2	6,009.9	17.3	13.7	-141.54	-466.9	200.5	789.4	762.5	26.95	29.287		
6,200.0	6,143.3	6,141.8	6,107.6	17.6	14.0	-141.27	-479.5	205.4	805.3	777.8	27.49	29.297		
6,300.0	6,242.2	6,240.5	6,205.3	18.0	14.3	-141.00	-492.2	210.3	821.2	793.2	28.02	29.308		
6,400.0	6,341.1	6,339.1	6,303.1	18.3	14.6	-140.74	-504.8	215.2	837.2	808.6	28.55	29.318		
6,500.0	6,440.1	6,437.8	6,400.8	18.6	14.9	-140.49	-517.4	220.1	853.1	824.0	29.09	29.329		
6,600.0	6,539.0	6,536.4	6,498.5	18.9	15.2	-140.26	-530.0	225.0	869.1	839.4	29.62	29.340		
6,700.0	6,637.9	6,635.1	6,596.2	19.2	15.5	-140.03	-542.6	229.9	885.0	854.9	30.15	29.351		
6,800.0	6,736.8	6,733.8	6,694.0	19.5	15.7	-139.80	-555.3	234.7	901.0	870.3	30.69	29.362		
6,900.0	6,835.7	6,832.4	6,791.7	19.8	16.0	-139.59	-567.9	239.6	917.0	885.8	31.22	29.373		
7,000.0	6,934.6	6,931.1	6,889.4	20.1	16.3	-139.38	-580.5	244.5	933.0	901.3	31.75	29.385		
7,100.0	7,033.6	7,029.7	6,987.1	20.4	16.6	-139.18	-593.1	249.4	949.0	916.8	32.28	29.396		
7,200.0	7,132.5	7,128.4	7,084.8	20.8	16.9	-138.99	-605.7	254.3	965.1	932.3	32.82	29.407		
7,300.0	7,231.4	7,227.0	7,182.6	21.1	17.2	-138.81	-618.4	259.2	981.1	947.8	33.35	29.419		
7,329.8	7,260.9	7,256.4	7,211.7	21.2	17.3	-138.75	-622.1	260.7	985.9	952.4	33.51	29.422		
7,350.0	7,280.9	7,276.5	7,231.6	21.2	17.3	-148.68	-624.7	261.7	989.2	955.6	33.58	29.456		
7,400.0	7,330.5	7,328.4	7,283.2	21.3	17.4	179.15	-629.2	264.2	997.3	963.6	33.69	29.605		
13,000.0	8,036.0	13,037.4	8,036.0	84.7	84.3	90.00	4,628.3	68.1	999.2	833.6	165.63	6.033		
13,100.0	8,036.0	13,136.2	8,036.0	86.4	86.0	90.00	4,726.9	61.5	984.0	814.9	169.06	5.820		
13,200.0	8,036.0	13,235.1	8,036.0	88.1	87.7	90.00	4,825.5	55.0	968.8	796.3	172.50	5.616		
13,300.0	8,036.0	13,333.9	8,036.0	89.8	89.5	90.00	4,924.1	48.4	953.6	777.7	175.93	5.420		
13,400.0	8,036.0	13,432.8	8,036.0	91.4	91.2	90.00	5,022.8	41.8	938.5	759.2	179.37	5.232		
13,500.0	8,036.0	13,531.6	8,036.0	93.1	92.9	90.00	5,121.4	35.3	923.5	740.7	182.81	5.051		
13,600.0	8,036.0	13,630.5	8,036.0	94.8	94.6	90.00	5,220.1	28.7	908.5	722.2	186.26	4.877		
13,700.0	8,036.0	13,729.4	8,036.0	96.5	96.3	90.00	5,318.7	22.1	893.5	703.8	189.70	4.710		
13,800.0	8,036.0	13,828.2	8,036.0	98.2	98.0	90.00	5,417.4	15.6	878.5	685.4	193.15	4.548		
13,900.0	8,036.0	13,927.1	8,036.0	99.9	99.7	90.00	5,516.0	9.0	863.6	667.0	196.60	4.393		
14,000.0	8,036.0	14,017.0	8,036.0	101.6	101.3	90.00	5,605.8	3.3	849.1	649.2	199.90	4.248		
14,100.0	8,036.0	14,100.0	8,036.0	103.2	102.7	90.00	5,688.6	-0.7	836.1	633.0	203.08	4.117		
14,200.0	8,036.0	14,190.2	8,036.0	104.9	104.3	90.00	5,778.8	-3.7	824.6	618.2	206.39	3.995		
14,300.0	8,036.0	14,277.3	8,036.0	106.6	105.8	90.00	5,865.8	-5.3	814.7	605.0	209.65	3.886		
14,400.0	8,036.0	14,368.4	8,036.0	108.3	107.4	90.00	5,957.0	-5.6	806.2	593.2	212.98	3.785		
14,500.0	8,036.0	14,468.1	8,036.0	110.1	109.1	90.00	6,056.7	-5.6	798.1	581.7	216.46	3.687		
14,600.0	8,036.0	14,567.8	8,036.0	111.8	110.9	90.00	6,156.4	-5.6	790.1	570.2	219.94	3.592		
14,700.0	8,036.0	14,667.5	8,036.0	113.5	112.6	90.00	6,256.0	-5.6	782.1	558.7	223.42	3.501		
14,800.0	8,036.0	14,767.1	8,036.0	115.2	114.3	90.00	6,355.7	-5.6	774.2	547.3	226.91	3.412		
14,900.0	8,036.0	14,866.8	8,036.0	116.9	116.1	90.00	6,455.4	-5.6	766.3	535.9	230.39	3.326		
15,009.1	8,036.0	14,975.6	8,036.0	118.8	117.9	90.00	6,564.2	-5.6	757.7	523.5	234.19	3.235		
15,100.0	8,036.0	15,066.3	8,036.0	120.3	119.5	90.00	6,654.8	-5.6	751.3	513.5	237.82	3.159		
15,200.0	8,036.0	15,166.1	8,036.0	122.0	121.3	90.00	6,754.7	-5.6	745.9	504.1	241.74	3.085		
15,300.0	8,036.0	15,266.0	8,036.0	123.8	123.0	90.00	6,854.6	-5.6	742.2	496.6	245.60	3.022		
15,400.0	8,036.0	15,366.0	8,036.0	125.5	124.7	90.00	6,954.6	-5.6	740.3	490.9	249.40	2.968		
15,459.1	8,036.0	15,425.2	8,036.0	126.5	125.8	90.00	7,013.7	-5.6	740.0	488.4	251.60	2.941		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4E-29H-P168 - Hz - Plan #3												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
15,459.1	8,036.0	15,425.2	8,036.0	126.5	125.8	90.00	7,013.7	-5.6	740.0	488.4	251.60	2.941	
15,470.3	8,036.0	15,436.3	8,036.0	126.7	126.0	90.00	7,024.9	-5.6	740.0	488.0	252.02	2.936	
15,500.0	8,036.0	15,466.0	8,036.0	127.2	126.5	90.00	7,054.6	-5.6	740.1	487.0	253.05	2.925	
15,600.0	8,036.0	15,566.0	8,036.0	129.0	128.2	90.00	7,154.6	-5.6	740.3	483.7	256.54	2.886	
15,700.0	8,036.0	15,666.0	8,036.0	130.7	130.0	90.00	7,254.6	-5.6	740.5	480.5	260.02	2.848	
15,800.0	8,036.0	15,766.0	8,036.0	132.4	131.7	90.00	7,354.6	-5.6	740.7	477.2	263.50	2.811	
15,900.0	8,036.0	15,866.0	8,036.0	134.2	133.5	90.00	7,454.6	-5.6	740.9	473.9	266.99	2.775	
16,000.0	8,036.0	15,966.0	8,036.0	135.9	135.2	90.00	7,554.6	-5.6	741.1	470.6	270.47	2.740	
16,100.0	8,036.0	16,066.0	8,036.0	137.6	136.9	90.00	7,654.6	-5.6	741.2	467.3	273.96	2.706	
16,200.0	8,036.0	16,166.0	8,036.0	139.4	138.7	90.00	7,754.6	-5.6	741.4	464.0	277.44	2.672	
16,300.0	8,036.0	16,266.0	8,036.0	141.1	140.4	90.00	7,854.6	-5.6	741.6	460.7	280.93	2.640	
16,400.0	8,036.0	16,366.0	8,036.0	142.8	142.2	90.00	7,954.6	-5.6	741.8	457.4	284.42	2.608	
16,500.0	8,036.0	16,466.0	8,036.0	144.6	143.9	90.00	8,054.6	-5.6	742.0	454.1	287.91	2.577	
16,600.0	8,036.0	16,566.0	8,036.0	146.3	145.7	90.00	8,154.6	-5.6	742.2	450.8	291.39	2.547	
16,700.0	8,036.0	16,666.0	8,036.0	148.0	147.4	90.00	8,254.6	-5.6	742.4	447.5	294.88	2.518	
16,800.0	8,036.0	16,766.0	8,036.0	149.8	149.1	90.00	8,354.6	-5.6	742.6	444.2	298.37	2.489	
16,842.7	8,036.0	16,808.8	8,036.0	150.5	149.9	90.00	8,397.3	-5.6	742.7	442.8	299.86	2.477	
16,900.0	8,036.0	16,837.1	8,036.0	151.5	150.4	90.00	8,425.7	-5.6	743.4	442.0	301.36	2.467 SF	
17,000.0	8,036.0	16,837.1	8,036.0	153.3	150.4	90.00	8,425.7	-5.6	754.1	451.0	303.10	2.488	
17,100.0	8,036.0	16,837.1	8,036.0	155.0	150.4	90.00	8,425.7	-5.6	777.6	472.8	304.85	2.551	
17,200.0	8,036.0	16,837.1	8,036.0	156.7	150.4	90.00	8,425.7	-5.6	812.9	506.3	306.59	2.651	
17,300.0	8,036.0	16,837.1	8,036.0	158.5	150.4	90.00	8,425.7	-5.6	858.4	550.1	308.34	2.784	
17,400.0	8,036.0	16,837.1	8,036.0	160.2	150.4	90.00	8,425.7	-5.6	912.6	602.6	310.08	2.943	
17,500.0	8,036.0	16,837.1	8,036.0	162.0	150.4	90.00	8,425.7	-5.6	974.1	662.3	311.83	3.124	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4F-29H-P168 - Hz - Plan #2													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	30.8	30.8					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	30.8	30.8	30.6	0.25	123.444		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	30.8	30.8	30.2	0.60	51.465		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	30.8	30.8	29.9	0.95	32.509		
400.0	400.0	400.0	400.0	0.6	0.6	90.05	0.0	30.8	30.8	29.5	1.30	23.758 CC, ES		
500.0	500.0	500.0	500.0	0.8	0.8	-140.28	0.0	30.8	31.5	29.8	1.65	19.123		
600.0	600.0	599.7	599.7	1.0	1.0	-141.84	-0.8	31.3	34.0	32.0	2.00	17.014		
700.0	699.9	699.2	699.2	1.2	1.2	-142.45	-2.9	32.7	38.7	36.3	2.35	16.470 SF		
800.0	799.7	798.6	798.5	1.4	1.4	-142.33	-6.6	35.0	45.7	43.0	2.71	16.849		
900.0	899.4	897.8	897.5	1.6	1.5	-141.76	-11.7	38.2	54.9	51.8	3.08	17.799		
1,000.0	998.9	996.6	996.0	1.8	1.7	-140.99	-18.1	42.4	66.3	62.8	3.47	19.107		
1,100.0	1,098.3	1,095.0	1,093.9	2.1	2.0	-140.15	-26.0	47.4	79.9	76.1	3.88	20.629		
1,200.0	1,197.4	1,192.9	1,191.3	2.3	2.2	-139.33	-35.3	53.4	95.8	91.5	4.30	22.269		
1,243.8	1,240.7	1,235.9	1,233.8	2.4	2.3	-139.00	-39.7	56.2	103.5	99.0	4.50	23.012		
1,300.0	1,296.3	1,291.2	1,288.7	2.6	2.4	-138.76	-45.5	59.9	113.4	108.7	4.75	23.893		
1,400.0	1,395.3	1,389.6	1,386.4	2.9	2.7	-138.41	-55.8	66.5	131.2	126.0	5.20	25.219		
1,500.0	1,494.2	1,488.0	1,484.0	3.2	2.9	-138.15	-66.1	73.1	148.9	143.3	5.66	26.304		
1,600.0	1,593.1	1,586.4	1,581.7	3.5	3.2	-137.94	-76.5	79.7	166.7	160.6	6.13	27.205		
1,700.0	1,692.0	1,684.8	1,679.3	3.8	3.5	-137.77	-86.8	86.3	184.5	177.9	6.60	27.962		
1,800.0	1,790.9	1,783.2	1,777.0	4.1	3.7	-137.63	-97.1	92.8	202.2	195.2	7.07	28.607		
1,900.0	1,889.9	1,881.6	1,874.6	4.4	4.0	-137.51	-107.4	99.4	220.0	212.5	7.54	29.162		
2,000.0	1,988.8	1,980.0	1,972.3	4.7	4.3	-137.42	-117.7	106.0	237.8	229.8	8.02	29.644		
2,100.0	2,087.7	2,078.5	2,069.9	5.0	4.5	-137.33	-128.0	112.6	255.5	247.0	8.50	30.065		
2,200.0	2,186.6	2,176.9	2,167.5	5.3	4.8	-137.26	-138.3	119.2	273.3	264.3	8.98	30.437		
2,300.0	2,285.5	2,275.3	2,265.2	5.6	5.1	-137.19	-148.6	125.8	291.1	281.6	9.46	30.767		
2,400.0	2,384.4	2,373.7	2,362.8	5.9	5.3	-137.13	-158.9	132.4	308.8	298.9	9.94	31.063		
2,500.0	2,483.4	2,472.1	2,460.5	6.2	5.6	-137.08	-169.2	138.9	326.6	316.2	10.43	31.328		
2,600.0	2,582.3	2,570.5	2,558.1	6.5	5.9	-137.04	-179.5	145.5	344.4	333.5	10.91	31.567		
2,700.0	2,681.2	2,668.9	2,655.8	6.8	6.1	-137.00	-189.8	152.1	362.2	350.8	11.39	31.785		
2,800.0	2,780.1	2,767.3	2,753.4	7.1	6.4	-136.96	-200.1	158.7	379.9	368.0	11.88	31.983		
2,900.0	2,879.0	2,865.7	2,851.1	7.4	6.7	-136.92	-210.4	165.3	397.7	385.3	12.36	32.164		
3,000.0	2,977.9	2,964.1	2,948.7	7.7	6.9	-136.89	-220.7	171.9	415.5	402.6	12.85	32.330		
3,100.0	3,076.9	3,062.5	3,046.4	8.0	7.2	-136.86	-231.0	178.5	433.2	419.9	13.34	32.483		
3,200.0	3,175.8	3,160.9	3,144.0	8.3	7.5	-136.84	-241.3	185.1	451.0	437.2	13.82	32.625		
3,300.0	3,274.7	3,259.3	3,241.7	8.7	7.8	-136.81	-251.6	191.6	468.8	454.5	14.31	32.756		
3,400.0	3,373.6	3,357.8	3,339.3	9.0	8.0	-136.79	-261.9	198.2	486.5	471.7	14.80	32.878		
3,500.0	3,472.5	3,456.2	3,436.9	9.3	8.3	-136.77	-272.2	204.8	504.3	489.0	15.29	32.992		
3,600.0	3,571.4	3,554.6	3,534.6	9.6	8.6	-136.75	-282.5	211.4	522.1	506.3	15.77	33.098		
3,700.0	3,670.4	3,653.0	3,632.2	9.9	8.8	-136.73	-292.8	218.0	539.9	523.6	16.26	33.197		
3,800.0	3,769.3	3,751.4	3,729.9	10.2	9.1	-136.71	-303.1	224.6	557.6	540.9	16.75	33.290		
3,900.0	3,868.2	3,849.8	3,827.5	10.5	9.4	-136.70	-313.4	231.2	575.4	558.2	17.24	33.377		
4,000.0	3,967.1	3,948.2	3,925.2	10.8	9.7	-136.68	-323.7	237.7	593.2	575.4	17.73	33.459		
4,100.0	4,066.0	4,046.6	4,022.8	11.1	9.9	-136.67	-334.0	244.3	610.9	592.7	18.22	33.537		
4,200.0	4,165.0	4,145.0	4,120.5	11.4	10.2	-136.66	-344.3	250.9	628.7	610.0	18.71	33.610		
4,300.0	4,263.9	4,243.4	4,218.1	11.8	10.5	-136.64	-354.6	257.5	646.5	627.3	19.20	33.679		
4,400.0	4,362.8	4,341.8	4,315.8	12.1	10.8	-136.63	-364.9	264.1	664.3	644.6	19.68	33.745		
4,500.0	4,461.7	4,440.2	4,413.4	12.4	11.0	-136.62	-375.2	270.7	682.0	661.9	20.17	33.807		
4,600.0	4,560.6	4,538.7	4,511.0	12.7	11.3	-136.61	-385.5	277.3	699.8	679.1	20.66	33.866		
4,700.0	4,659.5	4,637.1	4,608.7	13.0	11.6	-136.60	-395.8	283.9	717.6	696.4	21.15	33.923		
4,800.0	4,758.5	4,735.5	4,706.3	13.3	11.8	-136.59	-406.1	290.4	735.3	713.7	21.64	33.976		
4,900.0	4,857.4	4,833.9	4,804.0	13.6	12.1	-136.58	-416.4	297.0	753.1	731.0	22.13	34.027		
5,000.0	4,956.3	4,932.3	4,901.6	13.9	12.4	-136.57	-426.8	303.6	770.9	748.3	22.62	34.076		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4F-29H-P168 - Hz - Plan #2													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	5,055.2	5,030.7	4,999.3	14.2	12.7	-136.56	-437.1	310.2	788.7	765.5	23.11	34.123		
5,200.0	5,154.1	5,129.1	5,096.9	14.5	12.9	-136.55	-447.4	316.8	806.4	782.8	23.60	34.167		
5,300.0	5,253.0	5,227.5	5,194.6	14.9	13.2	-136.55	-457.7	323.4	824.2	800.1	24.09	34.210		
5,400.0	5,352.0	5,325.9	5,292.2	15.2	13.5	-136.54	-468.0	330.0	842.0	817.4	24.58	34.251		
5,500.0	5,450.9	5,424.3	5,389.9	15.5	13.8	-136.53	-478.3	336.5	859.7	834.7	25.07	34.290		
5,600.0	5,549.8	5,522.7	5,487.5	15.8	14.0	-136.52	-488.6	343.1	877.5	851.9	25.56	34.327		
5,700.0	5,648.7	5,621.1	5,585.1	16.1	14.3	-136.52	-498.9	349.7	895.3	869.2	26.05	34.363		
5,800.0	5,747.6	5,719.6	5,682.8	16.4	14.6	-136.51	-509.2	356.3	913.0	886.5	26.54	34.398		
5,900.0	5,846.6	5,818.0	5,780.4	16.7	14.9	-136.51	-519.5	362.9	930.8	903.8	27.03	34.431		
6,000.0	5,945.5	5,916.4	5,878.1	17.0	15.1	-136.50	-529.8	369.5	948.6	921.1	27.52	34.464		
6,100.0	6,044.4	6,014.8	5,975.7	17.3	15.4	-136.49	-540.1	376.1	966.4	938.3	28.01	34.495		
6,200.0	6,143.3	6,113.2	6,073.4	17.6	15.7	-136.49	-550.4	382.7	984.1	955.6	28.51	34.524		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4G-29H-P168 - Hz - Plan #3													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	0.1	0.1	90.05	0.0	39.2	39.2	39.0	0.25	157.111		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	39.2	39.2	38.6	0.60	65.501		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	39.2	39.2	38.3	0.95	41.375		
400.0	400.0	400.0	400.0	0.6	0.6	90.05	0.0	39.2	39.2	37.9	1.30	30.238 CC, ES		
500.0	500.0	498.9	498.9	0.8	0.8	-138.46	-1.2	40.5	41.2	39.5	1.65	25.034		
600.0	600.0	597.6	597.4	1.0	1.0	-136.50	-4.5	44.4	47.1	45.1	2.00	23.582 SF		
700.0	699.9	695.6	695.1	1.2	1.2	-134.14	-10.0	50.7	57.1	54.7	2.36	24.180		
800.0	799.7	792.8	791.6	1.4	1.5	-131.94	-17.6	59.5	71.1	68.4	2.74	25.979		
900.0	899.4	890.4	888.1	1.6	1.7	-130.29	-27.1	70.4	88.6	85.5	3.13	28.353		
1,000.0	998.9	988.6	985.2	1.8	2.0	-129.77	-36.7	81.6	107.5	104.0	3.53	30.458		
1,100.0	1,098.3	1,086.6	1,082.0	2.1	2.3	-129.96	-46.4	92.7	127.5	123.5	3.95	32.285		
1,200.0	1,197.4	1,184.3	1,178.7	2.3	2.6	-130.58	-56.0	103.8	148.6	144.2	4.38	33.890		
1,243.8	1,240.7	1,227.0	1,220.9	2.4	2.7	-130.94	-60.2	108.7	158.2	153.6	4.58	34.546		
1,300.0	1,296.3	1,281.8	1,275.0	2.6	2.9	-131.48	-65.6	114.9	170.7	165.8	4.83	35.307		
1,400.0	1,395.3	1,379.3	1,371.4	2.9	3.2	-132.26	-75.2	126.0	192.9	187.6	5.29	36.460		
1,500.0	1,494.2	1,476.7	1,467.8	3.2	3.5	-132.88	-84.8	137.0	215.1	209.4	5.75	37.409		
1,600.0	1,593.1	1,574.2	1,564.1	3.5	3.8	-133.39	-94.4	148.1	237.4	231.2	6.21	38.203		
1,700.0	1,692.0	1,671.7	1,660.5	3.8	4.1	-133.81	-104.0	159.2	259.6	253.0	6.68	38.876		
1,800.0	1,790.9	1,769.2	1,756.9	4.1	4.4	-134.16	-113.6	170.3	281.9	274.8	7.15	39.452		
1,900.0	1,889.9	1,866.6	1,853.2	4.4	4.7	-134.46	-123.2	181.3	304.2	296.6	7.61	39.952		
2,000.0	1,988.8	1,964.1	1,949.6	4.7	5.0	-134.72	-132.8	192.4	326.5	318.4	8.08	40.388		
2,100.0	2,087.7	2,061.6	2,046.0	5.0	5.3	-134.95	-142.4	203.5	348.8	340.3	8.56	40.772		
2,200.0	2,186.6	2,159.0	2,142.3	5.3	5.6	-135.15	-152.0	214.6	371.1	362.1	9.03	41.113		
2,300.0	2,285.5	2,256.5	2,238.7	5.6	5.9	-135.33	-161.6	225.6	393.5	384.0	9.50	41.417		
2,400.0	2,384.4	2,354.0	2,335.0	5.9	6.2	-135.48	-171.2	236.7	415.8	405.8	9.97	41.691		
2,500.0	2,483.4	2,451.5	2,431.4	6.2	6.5	-135.62	-180.8	247.8	438.1	427.7	10.45	41.938		
2,600.0	2,582.3	2,548.9	2,527.8	6.5	6.8	-135.75	-190.4	258.9	460.4	449.5	10.92	42.161		
2,700.0	2,681.2	2,646.4	2,624.1	6.8	7.1	-135.87	-200.0	269.9	482.8	471.4	11.40	42.365		
2,800.0	2,780.1	2,743.9	2,720.5	7.1	7.4	-135.98	-209.6	281.0	505.1	493.2	11.87	42.552		
2,900.0	2,879.0	2,841.3	2,816.9	7.4	7.8	-136.07	-219.2	292.1	527.4	515.1	12.34	42.723		
3,000.0	2,977.9	2,938.8	2,913.2	7.7	8.1	-136.16	-228.8	303.2	549.7	536.9	12.82	42.881		
3,100.0	3,076.9	3,036.3	3,009.6	8.0	8.4	-136.24	-238.4	314.2	572.1	558.8	13.30	43.027		
3,200.0	3,175.8	3,133.8	3,106.0	8.3	8.7	-136.32	-248.0	325.3	594.4	580.6	13.77	43.162		
3,300.0	3,274.7	3,231.2	3,202.3	8.7	9.0	-136.39	-257.6	336.4	616.7	602.5	14.25	43.287		
3,400.0	3,373.6	3,328.7	3,298.7	9.0	9.3	-136.46	-267.2	347.5	639.1	624.4	14.72	43.404		
3,500.0	3,472.5	3,426.2	3,395.0	9.3	9.6	-136.52	-276.8	358.5	661.4	646.2	15.20	43.514		
3,600.0	3,571.4	3,523.6	3,491.4	9.6	9.9	-136.57	-286.4	369.6	683.7	668.1	15.68	43.616		
3,700.0	3,670.4	3,621.1	3,587.8	9.9	10.2	-136.63	-296.0	380.7	706.1	689.9	16.15	43.712		
3,800.0	3,769.3	3,718.6	3,684.1	10.2	10.5	-136.68	-305.6	391.8	728.4	711.8	16.63	43.802		
3,900.0	3,868.2	3,816.1	3,780.5	10.5	10.8	-136.72	-315.2	402.8	750.8	733.6	17.11	43.887		
4,000.0	3,967.1	3,913.5	3,876.9	10.8	11.1	-136.77	-324.8	413.9	773.1	755.5	17.58	43.967		
4,100.0	4,066.0	4,011.0	3,973.2	11.1	11.4	-136.81	-334.4	425.0	795.4	777.4	18.06	44.042		
4,200.0	4,165.0	4,108.5	4,069.6	11.4	11.8	-136.85	-344.0	436.1	817.8	799.2	18.54	44.114		
4,300.0	4,263.9	4,205.9	4,165.9	11.8	12.1	-136.89	-353.6	447.1	840.1	821.1	19.01	44.182		
4,400.0	4,362.8	4,303.4	4,262.3	12.1	12.4	-136.92	-363.2	458.2	862.5	843.0	19.49	44.246		
4,500.0	4,461.7	4,400.9	4,358.7	12.4	12.7	-136.96	-372.8	469.3	884.8	864.8	19.97	44.307		
4,600.0	4,560.6	4,498.4	4,455.0	12.7	13.0	-136.99	-382.4	480.4	907.1	886.7	20.45	44.365		
4,700.0	4,659.5	4,595.8	4,551.4	13.0	13.3	-137.02	-392.0	491.4	929.5	908.5	20.92	44.421		
4,800.0	4,758.5	4,693.3	4,647.8	13.3	13.6	-137.05	-401.6	502.5	951.8	930.4	21.40	44.474		
4,900.0	4,857.4	4,790.8	4,744.1	13.6	13.9	-137.08	-411.2	513.6	974.2	952.3	21.88	44.524		
5,000.0	4,956.3	4,888.2	4,840.5	13.9	14.2	-137.10	-420.8	524.7	996.5	974.1	22.36	44.572		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	1.79	328.3	10.2	328.7						
100.0	100.0	91.8	91.8	0.1	0.2	1.86	327.8	10.6	328.0	327.7	0.28	1,189.965			
200.0	200.0	195.5	195.5	0.3	0.3	2.10	326.2	12.0	326.5	325.8	0.62	526.053			
300.0	300.0	300.9	300.8	0.5	0.5	2.20	323.1	12.4	323.5	322.6	0.98	329.075			
400.0	400.0	404.9	404.5	0.6	0.7	1.31	318.6	7.3	319.1	317.7	1.37	232.445			
500.0	500.0	506.2	505.2	0.8	1.0	130.28	313.3	-3.2	314.4	312.6	1.75	179.990			
600.0	600.0	603.3	601.1	1.0	1.3	127.98	308.4	-17.7	311.3	309.0	2.21	140.593			
665.0	664.9	665.3	661.9	1.1	1.5	126.23	305.6	-29.0	310.6	308.1	2.56	121.551	CC, ES		
700.0	699.9	698.2	694.2	1.2	1.6	125.22	304.2	-35.7	310.8	308.1	2.75	113.112			
800.0	799.7	790.2	783.8	1.4	2.0	122.25	301.4	-56.1	313.8	310.5	3.33	94.142			
900.0	899.4	876.3	867.2	1.6	2.4	119.42	301.1	-77.3	321.8	317.9	3.93	81.916			
1,000.0	998.9	972.4	960.1	1.8	2.8	116.59	302.8	-101.7	333.6	329.1	4.57	72.957			
1,100.0	1,098.3	1,068.1	1,052.7	2.1	3.2	114.24	305.1	-125.8	347.5	342.3	5.23	66.484			
1,200.0	1,197.4	1,160.9	1,142.3	2.3	3.7	112.22	308.1	-150.1	363.6	357.7	5.90	61.642			
1,243.8	1,240.7	1,200.9	1,180.8	2.4	3.9	111.42	309.7	-161.0	371.4	365.2	6.19	59.967			
1,300.0	1,296.3	1,251.3	1,229.1	2.6	4.1	110.56	312.2	-174.9	382.2	375.6	6.57	58.153			
1,400.0	1,395.3	1,335.3	1,309.3	2.9	4.6	109.18	318.0	-199.0	403.8	396.6	7.22	55.915			
1,500.0	1,494.2	1,431.6	1,401.1	3.2	5.1	107.78	326.2	-227.0	427.3	419.4	7.91	54.007			
1,600.0	1,593.1	1,527.3	1,492.3	3.5	5.6	106.56	334.6	-254.7	451.3	442.7	8.60	52.482			
1,700.0	1,692.0	1,625.6	1,586.0	3.8	6.2	105.41	343.2	-283.3	475.4	466.1	9.29	51.176			
1,800.0	1,790.9	1,733.0	1,688.7	4.1	6.8	104.30	351.3	-313.9	498.3	488.3	10.01	49.776			
1,900.0	1,889.9	1,833.6	1,785.0	4.4	7.3	103.30	357.3	-342.2	519.7	509.0	10.70	48.569			
2,000.0	1,988.8	1,929.3	1,876.8	4.7	7.8	102.50	363.5	-368.6	541.7	530.3	11.36	47.695			
2,100.0	2,087.7	2,027.4	1,971.0	5.0	8.3	101.82	369.8	-395.0	563.2	551.2	12.02	46.873			
2,200.0	2,186.6	2,116.9	2,056.8	5.3	8.8	101.25	376.4	-419.4	585.8	573.1	12.65	46.318			
2,300.0	2,285.5	2,207.1	2,143.1	5.6	9.3	100.62	383.5	-445.2	609.6	596.3	13.29	45.871			
2,400.0	2,384.4	2,298.5	2,229.9	5.9	9.9	99.96	391.1	-472.4	634.4	620.5	13.93	45.537			
2,500.0	2,483.4	2,396.1	2,322.7	6.2	10.4	99.35	400.0	-501.5	660.0	645.4	14.59	45.249			
2,600.0	2,582.3	2,500.4	2,422.2	6.5	11.0	98.77	408.3	-531.5	684.2	668.9	15.26	44.834			
2,700.0	2,681.2	2,603.8	2,521.1	6.8	11.6	98.30	417.0	-560.7	708.5	692.6	15.91	44.530			
2,800.0	2,780.1	2,700.7	2,614.4	7.1	12.1	98.05	424.8	-585.6	731.1	714.6	16.52	44.255			
2,900.0	2,879.0	2,794.3	2,704.5	7.4	12.5	97.94	434.3	-608.9	755.1	738.0	17.12	44.118			
3,000.0	2,977.9	2,883.4	2,790.4	7.7	13.0	97.86	443.3	-631.0	779.0	761.3	17.72	43.969			
3,100.0	3,076.9	2,966.4	2,869.7	8.0	13.5	97.66	452.2	-653.8	804.9	786.6	18.31	43.964			
3,200.0	3,175.8	3,064.1	2,962.5	8.3	14.0	97.33	462.5	-682.4	831.6	812.6	18.96	43.853			
3,300.0	3,274.7	3,168.3	3,061.3	8.7	14.7	96.81	471.1	-714.5	857.3	837.7	19.64	43.641			
3,400.0	3,373.6	3,268.6	3,156.4	9.0	15.3	96.34	479.0	-745.2	882.7	862.4	20.30	43.476			
3,500.0	3,472.5	3,361.1	3,244.3	9.3	15.8	95.93	486.2	-773.4	907.9	887.0	20.93	43.378			
3,600.0	3,571.4	3,457.9	3,336.1	9.6	16.4	95.54	494.2	-803.0	933.7	912.1	21.58	43.267			
3,700.0	3,670.4	3,543.1	3,416.7	9.9	16.9	95.18	501.0	-829.6	959.6	937.5	22.17	43.276			
3,800.0	3,769.3	3,636.2	3,504.7	10.2	17.5	94.86	510.2	-858.5	987.1	964.3	22.79	43.303			
8,300.0	8,003.0	8,228.7	8,027.9	20.7	29.2	-64.09	679.8	-1,365.7	968.2	939.2	28.97	33.423			
8,350.0	8,016.3	8,240.6	8,039.8	20.8	29.2	-71.74	679.6	-1,365.2	925.5	895.6	29.94	30.918			
8,400.0	8,026.2	8,249.3	8,048.5	20.9	29.2	-79.13	679.5	-1,364.8	883.2	852.5	30.69	28.774			
8,450.0	8,032.7	8,254.7	8,053.9	21.0	29.2	-85.90	679.4	-1,364.6	841.4	810.4	31.07	27.078			
8,500.0	8,035.7	8,256.8	8,056.0	21.1	29.2	-91.77	679.3	-1,364.5	800.7	769.6	31.07	25.769			
8,519.1	8,036.0	8,256.7	8,055.9	21.2	29.2	-93.74	679.3	-1,364.5	785.5	754.5	30.99	25.346			
8,600.0	8,036.0	8,255.3	8,054.5	21.5	29.2	-93.58	679.4	-1,364.5	723.3	691.8	31.45	22.999			
8,700.0	8,036.0	8,253.6	8,052.8	22.0	29.2	-93.37	679.4	-1,364.6	652.1	619.9	32.17	20.269			
8,800.0	8,036.0	8,251.9	8,051.1	22.7	29.2	-93.16	679.4	-1,364.7	589.3	556.2	33.05	17.832			
8,859.1	8,036.0	8,250.8	8,050.0	23.1	29.2	-93.04	679.4	-1,364.7	557.3	523.6	33.62	16.573			
8,900.0	8,036.0	8,250.1	8,049.3	23.4	29.2	-92.95	679.4	-1,364.8	537.8	503.8	34.05	15.795			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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		
9,000.0	8,036.0	8,248.3	8,047.5	24.3	29.2	-92.74	679.5	-1,364.9	501.3	466.1	35.16	14.256		
9,100.0	8,036.0	8,246.5	8,045.7	25.2	29.2	-92.53	679.5	-1,364.9	483.0	446.6	36.37	13.281		
9,139.9	8,036.0	8,245.8	8,045.0	25.6	29.2	-92.44	679.5	-1,365.0	481.4	444.5	36.88	13.052		
9,200.0	8,036.0	8,244.7	8,043.9	26.3	29.2	-92.31	679.5	-1,365.0	485.1	447.4	37.65	12.884 SF		
9,300.0	8,036.0	8,242.9	8,042.1	27.4	29.2	-92.09	679.6	-1,365.1	507.3	468.3	39.00	13.008		
9,400.0	8,036.0	8,241.0	8,040.2	28.6	29.2	-91.87	679.6	-1,365.2	547.1	506.7	40.40	13.544		
9,500.0	8,036.0	8,239.1	8,038.4	29.8	29.2	-91.65	679.6	-1,365.3	601.1	559.3	41.84	14.367		
9,600.0	8,036.0	8,237.2	8,036.5	31.1	29.2	-91.42	679.7	-1,365.3	665.8	622.5	43.32	15.370		
9,700.0	8,036.0	8,235.3	8,034.6	32.4	29.2	-91.20	679.7	-1,365.4	738.4	693.6	44.83	16.471		
9,800.0	8,036.0	8,233.4	8,032.6	33.8	29.2	-90.97	679.7	-1,365.5	816.9	770.5	46.37	17.616		
9,900.0	8,036.0	8,231.4	8,030.7	35.2	29.2	-90.74	679.7	-1,365.6	899.6	851.6	47.93	18.767		
10,000.0	8,036.0	8,229.5	8,028.7	36.6	29.2	-90.50	679.8	-1,365.7	985.5	936.0	49.51	19.903		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29QD (EXISTING) - SYNERGY WELL - PLA													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		
5,500.0	5,450.9	5,800.0	5,513.3	15.5	32.4	34.23	-574.6	-1,502.3	997.8	963.3	34.57	28.863		
5,600.0	5,549.8	5,878.1	5,590.4	15.8	32.6	34.12	-581.6	-1,492.3	974.2	939.2	34.99	27.841		
5,700.0	5,648.7	5,956.3	5,667.9	16.1	32.8	34.10	-587.4	-1,484.0	952.5	917.2	35.37	26.930		
5,800.0	5,747.6	6,035.1	5,746.3	16.4	32.9	34.17	-592.1	-1,477.5	932.8	897.1	35.71	26.124		
5,900.0	5,846.6	6,114.5	5,825.5	16.7	33.1	34.33	-595.5	-1,472.6	915.2	879.1	36.00	25.420		
6,000.0	5,945.5	6,200.0	5,910.9	17.0	33.2	34.62	-597.7	-1,469.4	899.6	863.3	36.25	24.814		
6,100.0	6,044.4	6,274.4	5,985.3	17.3	33.2	34.97	-598.5	-1,468.3	886.0	849.6	36.45	24.305		
6,200.0	6,143.3	6,369.9	6,080.8	17.6	33.2	35.49	-598.5	-1,468.3	873.9	837.3	36.63	23.858		
6,300.0	6,242.2	6,468.8	6,179.7	18.0	33.3	36.06	-598.5	-1,468.3	862.0	825.2	36.81	23.419		
6,400.0	6,341.1	6,567.8	6,278.6	18.3	33.4	36.64	-598.5	-1,468.3	850.1	813.1	36.98	22.986		
6,500.0	6,440.1	6,666.7	6,377.6	18.6	33.4	37.23	-598.5	-1,468.3	838.4	801.2	37.16	22.560		
6,600.0	6,539.0	6,765.6	6,476.5	18.9	33.5	37.85	-598.5	-1,468.3	826.7	789.3	37.34	22.140		
6,700.0	6,637.9	6,864.5	6,575.4	19.2	33.5	38.48	-598.5	-1,468.3	815.1	777.6	37.52	21.727		
6,800.0	6,736.8	6,963.4	6,674.3	19.5	33.6	39.13	-598.5	-1,468.3	803.6	765.9	37.69	21.319		
6,900.0	6,835.7	7,062.3	6,773.2	19.8	33.7	39.79	-598.5	-1,468.3	792.2	754.4	37.87	20.918		
7,000.0	6,934.6	7,161.3	6,872.1	20.1	33.7	40.48	-598.5	-1,468.3	781.0	742.9	38.05	20.523		
7,100.0	7,033.6	7,260.2	6,971.1	20.4	33.8	41.18	-598.5	-1,468.3	769.8	731.6	38.23	20.135		
7,200.0	7,132.5	7,359.1	7,070.0	20.8	33.9	41.91	-598.5	-1,468.3	758.8	720.4	38.41	19.752		
7,300.0	7,231.4	7,458.0	7,168.9	21.1	33.9	42.66	-598.5	-1,468.3	747.9	709.3	38.60	19.376		
7,329.8	7,260.9	7,487.5	7,198.4	21.2	34.0	42.88	-598.5	-1,468.3	744.6	706.0	38.65	19.265		
7,350.0	7,280.9	7,507.5	7,218.4	21.2	34.0	33.12	-598.5	-1,468.3	742.4	703.7	38.71	19.178		
7,400.0	7,330.5	7,557.1	7,268.0	21.3	34.0	1.13	-598.5	-1,468.3	736.7	697.9	38.87	18.954		
7,450.0	7,380.1	7,606.7	7,317.6	21.4	34.0	-29.07	-598.5	-1,468.3	730.8	691.7	39.06	18.708		
7,500.0	7,429.4	7,656.1	7,366.9	21.5	34.1	-47.84	-598.5	-1,468.3	724.5	685.2	39.29	18.440		
7,550.0	7,478.3	7,704.9	7,415.8	21.5	34.1	-59.06	-598.5	-1,468.3	718.1	678.6	39.56	18.154		
7,600.0	7,526.3	7,753.0	7,463.8	21.5	34.1	-66.56	-598.5	-1,468.3	711.7	671.9	39.85	17.858		
7,650.0	7,573.4	7,800.1	7,510.9	21.5	34.2	-72.20	-598.5	-1,468.3	705.6	665.4	40.18	17.562		
7,700.0	7,619.3	7,845.9	7,556.8	21.4	34.2	-76.83	-598.5	-1,468.3	699.9	659.4	40.51	17.277		
7,750.0	7,663.8	7,890.4	7,601.3	21.4	34.2	-80.86	-598.5	-1,468.3	695.0	654.1	40.83	17.020		
7,800.0	7,706.6	7,933.2	7,644.1	21.3	34.3	-84.48	-598.5	-1,468.3	691.2	650.0	41.13	16.806		
7,850.0	7,747.5	7,974.1	7,685.0	21.2	34.3	-87.78	-598.5	-1,468.3	688.8	647.5	41.37	16.651		
7,886.7	7,776.2	8,002.8	7,713.7	21.2	34.3	-90.00	-598.5	-1,468.3	688.3	646.8	41.50	16.584 CC, ES		
7,900.0	7,786.4	8,013.0	7,723.9	21.1	34.3	-90.77	-598.5	-1,468.3	688.4	646.8	41.54	16.571 SF		
7,950.0	7,823.0	8,049.6	7,760.5	21.1	34.3	-93.44	-598.5	-1,468.3	690.1	648.5	41.62	16.580		
8,000.0	7,857.2	8,083.8	7,794.7	21.0	34.4	-95.77	-598.5	-1,468.3	694.4	652.8	41.61	16.689		
8,050.0	7,888.8	8,115.4	7,826.3	20.9	34.4	-97.72	-598.5	-1,468.3	701.6	660.1	41.50	16.905		
8,100.0	7,917.6	8,144.3	7,855.1	20.8	34.4	-99.25	-598.5	-1,468.3	711.9	670.6	41.31	17.235		
8,150.0	7,943.6	8,170.2	7,881.1	20.8	34.4	-100.32	-598.5	-1,468.3	725.4	684.4	41.04	17.676		
8,200.0	7,966.5	8,193.2	7,904.0	20.7	34.4	-100.89	-598.5	-1,468.3	742.3	701.6	40.73	18.225		
8,250.0	7,986.4	8,213.0	7,923.9	20.7	34.5	-100.92	-598.5	-1,468.3	762.5	722.1	40.40	18.873		
8,300.0	8,003.0	8,229.6	7,940.5	20.7	34.5	-100.37	-598.5	-1,468.3	785.8	745.7	40.09	19.604		
8,350.0	8,016.3	8,242.9	7,953.8	20.8	34.5	-99.19	-598.5	-1,468.3	812.2	772.4	39.81	20.400		
8,400.0	8,026.2	8,252.8	7,963.7	20.9	34.5	-97.34	-598.5	-1,468.3	841.3	801.7	39.61	21.241		
8,450.0	8,032.7	8,259.3	7,970.2	21.0	34.5	-94.77	-598.5	-1,468.3	872.9	833.4	39.49	22.105		
8,500.0	8,035.7	8,262.4	7,973.2	21.1	34.5	-91.46	-598.5	-1,468.3	906.6	867.1	39.46	22.974		
8,519.1	8,036.0	8,262.6	7,973.5	21.2	34.5	-90.00	-598.5	-1,468.3	920.0	880.5	39.48	23.304		
8,600.0	8,036.0	8,262.6	7,973.5	21.5	34.5	-90.00	-598.5	-1,468.3	978.8	938.9	39.93	24.515		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SUR													Offset Site Error:	0.0 ft
Survey Program: 216-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							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		
9,900.0	8,036.0	8,139.4	8,024.2	35.2	21.6	87.85	2,052.7	-121.3	996.5	943.6	52.90	18.839		
10,000.0	8,036.0	8,141.2	8,026.0	36.6	21.6	87.97	2,052.8	-121.2	945.4	890.9	54.48	17.354		
10,100.0	8,036.0	8,143.0	8,027.8	38.1	21.6	88.10	2,052.8	-121.2	902.5	846.5	56.08	16.095		
10,200.0	8,036.0	8,144.8	8,029.6	39.5	21.6	88.22	2,052.8	-121.1	869.1	811.4	57.69	15.065		
10,300.0	8,036.0	8,147.0	8,031.8	41.0	21.6	88.37	2,052.9	-121.1	846.2	786.9	59.32	14.266		
10,359.1	8,036.0	8,147.6	8,032.4	41.9	21.6	88.42	2,052.9	-121.1	838.0	777.7	60.28	13.901		
10,400.0	8,036.0	8,148.4	8,033.2	42.6	21.6	88.47	2,052.9	-121.1	834.6	773.7	60.88	13.709		
10,461.2	8,036.0	8,149.5	8,034.3	43.5	21.6	88.54	2,052.9	-121.0	832.7	770.9	61.77	13.480 CC, ES		
10,500.0	8,036.0	8,150.2	8,035.1	44.1	21.6	88.59	2,052.9	-121.0	833.4	771.1	62.34	13.370		
10,600.0	8,036.0	8,152.1	8,037.0	45.6	21.6	88.73	2,053.0	-121.0	842.5	778.7	63.79	13.208		
10,659.1	8,036.0	8,153.3	8,038.1	46.5	21.6	88.81	2,053.0	-120.9	852.5	787.9	64.64	13.190 SF		
10,700.0	8,036.0	8,154.1	8,038.9	47.1	21.6	88.86	2,053.0	-120.9	861.6	796.3	65.32	13.191		
10,800.0	8,036.0	8,156.0	8,040.8	48.7	21.6	88.99	2,053.0	-120.9	891.2	824.3	66.98	13.306		
10,900.0	8,036.0	8,157.9	8,042.7	50.3	21.6	89.12	2,053.1	-120.8	930.7	862.1	68.65	13.558		
11,000.0	8,036.0	8,159.8	8,044.6	51.8	21.6	89.26	2,053.1	-120.8	978.9	908.6	70.33	13.919		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SUR													Offset Site Error:	0.0 ft
Survey Program: 1020-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	20.11	280.1	102.5	298.5					
100.0	100.0	87.5	87.5	0.1	0.2	20.12	280.1	102.6	298.3	298.0	0.28	1,077.779		
200.0	200.0	187.5	187.5	0.3	0.3	20.17	280.0	102.9	298.3	297.7	0.62	477.279		
300.0	300.0	287.5	287.5	0.5	0.5	20.26	279.8	103.3	298.3	297.3	0.97	306.505		
400.0	400.0	387.5	387.5	0.6	0.7	20.38	279.6	103.9	298.3	297.0	1.32	225.736		
500.0	500.0	487.5	487.5	0.8	0.9	151.32	279.3	104.6	299.1	297.4	1.68	178.208		
600.0	600.0	587.4	587.4	1.0	1.0	151.74	279.0	105.6	301.4	299.4	2.03	148.580		
700.0	699.9	687.3	687.2	1.2	1.2	152.33	278.6	106.7	305.3	302.9	2.38	128.296		
800.0	799.7	787.0	787.0	1.4	1.4	153.08	278.1	108.0	310.8	308.0	2.73	113.765		
900.0	899.4	886.6	886.5	1.6	1.6	153.97	277.6	109.5	317.9	314.8	3.08	103.041		
1,000.0	998.9	986.0	985.9	1.8	1.7	154.98	277.0	111.1	326.7	323.2	3.44	94.977		
1,100.0	1,098.3	1,092.9	1,092.8	2.1	1.9	156.14	275.6	112.6	336.4	332.6	3.81	88.332		
1,200.0	1,197.4	1,208.6	1,208.4	2.3	2.1	157.33	270.6	111.5	344.1	339.9	4.19	82.102		
1,243.8	1,240.7	1,261.9	1,261.5	2.4	2.2	157.91	266.4	110.1	346.3	341.9	4.37	79.293		
1,300.0	1,296.3	1,327.4	1,326.5	2.6	2.4	158.82	259.0	108.5	347.7	343.1	4.59	75.716		
1,400.0	1,395.3	1,438.9	1,436.9	2.9	2.6	160.58	243.1	105.4	347.7	342.7	4.99	69.741		
1,500.0	1,494.2	1,551.5	1,547.6	3.2	2.9	162.42	223.3	100.4	344.1	338.7	5.39	63.883		
1,600.0	1,593.1	1,658.3	1,651.9	3.5	3.3	164.49	200.9	95.4	337.8	332.0	5.79	58.319		
1,700.0	1,692.0	1,766.6	1,757.2	3.8	3.7	166.66	176.3	88.8	329.6	323.4	6.20	53.162		
1,800.0	1,790.9	1,867.0	1,854.3	4.1	4.1	168.86	151.7	82.0	320.0	313.4	6.62	48.332		
1,900.0	1,889.9	1,960.8	1,945.0	4.4	4.5	171.27	128.5	77.0	311.6	304.6	7.05	44.206		
2,000.0	1,988.8	2,062.4	2,043.3	4.7	4.9	174.11	103.2	72.2	304.1	296.6	7.54	40.359		
2,100.0	2,087.7	2,160.4	2,137.9	5.0	5.4	177.15	77.9	67.9	297.0	288.9	8.06	36.859		
2,200.0	2,186.6	2,257.2	2,231.4	5.3	5.8	-179.72	53.2	64.0	291.2	282.6	8.61	33.820		
2,300.0	2,285.5	2,355.4	2,326.4	5.6	6.2	-176.62	29.0	59.6	286.6	277.4	9.20	31.152		
2,400.0	2,384.4	2,453.2	2,421.3	5.9	6.6	-173.53	5.5	55.3	283.4	273.5	9.83	28.829		
2,500.0	2,483.4	2,554.2	2,519.1	6.2	7.1	-170.19	-19.4	50.6	280.4	269.8	10.53	26.628		
2,600.0	2,582.3	2,653.2	2,614.8	6.5	7.6	-166.78	-44.3	46.0	278.1	266.8	11.27	24.676		
2,700.0	2,681.2	2,751.7	2,710.2	6.8	8.0	-163.57	-68.2	40.6	276.5	264.5	12.02	22.999		
2,762.5	2,743.1	2,812.4	2,769.0	7.0	8.3	-161.67	-82.5	37.3	276.2	263.7	12.50	22.097 CC		
2,800.0	2,780.1	2,848.7	2,804.3	7.1	8.4	-160.52	-91.0	35.5	276.3	263.5	12.80	21.591		
2,900.0	2,879.0	2,950.6	2,903.0	7.4	8.9	-157.14	-115.7	30.7	277.2	263.6	13.66	20.289		
3,000.0	2,977.9	3,051.7	3,000.6	7.7	9.4	-153.67	-141.3	24.4	277.3	262.7	14.58	19.023 ES		
3,100.0	3,076.9	3,148.2	3,093.7	8.0	9.8	-150.27	-166.2	18.6	278.6	263.1	15.49	17.981		
3,200.0	3,175.8	3,249.7	3,191.8	8.3	10.3	-146.91	-191.5	12.6	281.1	264.6	16.43	17.102		
3,300.0	3,274.7	3,348.6	3,287.5	8.7	10.8	-143.84	-215.6	5.8	283.5	266.1	17.35	16.335		
3,400.0	3,373.6	3,445.2	3,380.8	9.0	11.2	-140.71	-240.0	-0.5	287.2	268.8	18.31	15.683		
3,500.0	3,472.5	3,544.8	3,476.6	9.3	11.7	-137.31	-266.6	-6.5	292.1	272.8	19.30	15.132		
3,600.0	3,571.4	3,639.0	3,567.4	9.6	12.2	-134.38	-290.7	-11.9	298.4	278.2	20.21	14.764		
3,700.0	3,670.4	3,739.1	3,664.4	9.9	12.6	-131.67	-315.2	-16.9	306.0	284.9	21.11	14.500		
3,800.0	3,769.3	3,840.2	3,762.3	10.2	13.1	-129.07	-339.7	-22.6	313.7	291.7	22.01	14.253		
3,900.0	3,868.2	3,941.1	3,859.8	10.5	13.6	-126.47	-364.8	-29.2	321.1	298.2	22.90	14.021		
4,000.0	3,967.1	4,038.3	3,953.6	10.8	14.1	-123.99	-389.4	-35.7	329.1	305.4	23.76	13.850		
4,100.0	4,066.0	4,135.1	4,047.1	11.1	14.5	-121.69	-413.7	-41.7	338.2	313.7	24.59	13.756		
4,200.0	4,165.0	4,232.8	4,141.6	11.4	15.0	-119.59	-437.9	-47.0	348.4	323.1	25.38	13.729 SF		
4,300.0	4,263.9	4,335.0	4,241.2	11.8	15.4	-117.96	-460.6	-52.0	358.6	332.5	26.11	13.736		
4,400.0	4,362.8	4,437.0	4,341.2	12.1	15.7	-117.00	-479.4	-56.7	367.9	341.2	26.77	13.743		
4,500.0	4,461.7	4,536.4	4,439.3	12.4	16.1	-116.46	-495.6	-60.6	377.2	349.8	27.39	13.772		
4,600.0	4,560.6	4,637.5	4,539.3	12.7	16.4	-116.28	-510.0	-63.8	386.3	358.3	27.97	13.811		
4,700.0	4,659.5	4,739.4	4,640.4	13.0	16.6	-116.46	-522.0	-66.6	394.9	366.4	28.51	13.852		
4,800.0	4,758.5	4,838.3	4,738.9	13.3	16.8	-117.08	-530.6	-68.4	403.1	374.2	28.98	13.911		
4,900.0	4,857.4	4,938.3	4,838.7	13.6	17.0	-117.97	-537.5	-69.3	411.7	382.3	29.43	13.988		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
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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 #4	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				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		
5,000.0	4,956.3	5,041.0	4,941.2	13.9	17.2	-118.90	-544.1	-70.6	419.8	390.0	29.88	14.052		
5,100.0	5,055.2	5,144.0	5,044.0	14.2	17.4	-119.87	-549.7	-72.6	427.0	396.7	30.30	14.092		
5,200.0	5,154.1	5,240.4	5,140.4	14.5	17.5	-121.10	-552.5	-73.8	434.3	403.7	30.63	14.179		
5,300.0	5,253.0	5,340.5	5,240.4	14.9	17.6	-122.61	-553.4	-73.9	442.3	411.3	30.93	14.299		
5,400.0	5,352.0	5,440.7	5,340.6	15.2	17.7	-124.10	-554.1	-74.2	450.3	419.1	31.21	14.427		
5,500.0	5,450.9	5,541.7	5,441.6	15.5	17.8	-125.55	-554.7	-74.9	458.3	426.8	31.48	14.557		
5,600.0	5,549.8	5,642.2	5,542.1	15.8	17.9	-126.95	-555.1	-75.9	466.1	434.4	31.74	14.685		
5,700.0	5,648.7	5,741.2	5,641.1	16.1	18.0	-128.27	-555.7	-77.1	474.1	442.1	31.99	14.819		
5,800.0	5,747.6	5,840.1	5,740.0	16.4	18.1	-129.52	-556.3	-78.2	482.3	450.1	32.23	14.964		
5,900.0	5,846.6	5,938.5	5,838.4	16.7	18.2	-130.75	-556.8	-79.2	490.9	458.4	32.46	15.125		
6,000.0	5,945.5	6,037.3	5,937.2	17.0	18.3	-131.98	-557.0	-80.1	499.8	467.1	32.66	15.301		
6,100.0	6,044.4	6,136.7	6,036.5	17.3	18.4	-133.21	-556.8	-81.0	508.9	476.0	32.86	15.489		
6,200.0	6,143.3	6,235.7	6,135.6	17.6	18.5	-134.44	-556.3	-81.8	518.2	485.2	33.03	15.688		
6,300.0	6,242.2	6,334.5	6,234.4	18.0	18.6	-135.64	-555.5	-82.7	527.7	494.5	33.20	15.896		
6,400.0	6,341.1	6,431.0	6,330.9	18.3	18.7	-136.81	-554.5	-83.3	537.7	504.3	33.34	16.127		
6,500.0	6,440.1	6,526.2	6,426.1	18.6	18.7	-138.02	-552.5	-83.4	548.4	515.0	33.46	16.393		
6,600.0	6,539.0	6,622.9	6,522.7	18.9	18.8	-139.28	-549.8	-82.8	560.0	526.5	33.55	16.691		
6,700.0	6,637.9	6,720.1	6,619.9	19.2	18.8	-140.52	-546.7	-82.1	572.1	538.5	33.64	17.008		
6,800.0	6,736.8	6,823.8	6,723.5	19.5	18.9	-141.83	-543.2	-81.6	584.2	550.5	33.70	17.336		
6,900.0	6,835.7	6,929.0	6,828.6	19.8	19.0	-143.13	-539.3	-82.2	595.5	561.8	33.76	17.643		
7,000.0	6,934.6	7,031.0	6,930.5	20.1	19.0	-144.40	-534.9	-83.8	606.3	572.5	33.79	17.944		
7,100.0	7,033.6	7,131.9	7,031.3	20.4	19.1	-145.70	-529.9	-85.9	616.8	583.0	33.80	18.247		
7,200.0	7,132.5	7,228.2	7,127.4	20.8	19.1	-146.95	-524.3	-88.0	627.6	593.8	33.80	18.567		
7,300.0	7,231.4	7,323.5	7,222.4	21.1	19.1	-148.22	-518.1	-89.8	639.1	605.3	33.79	18.914		
7,329.8	7,260.9	7,351.1	7,250.0	21.2	19.1	-148.58	-516.2	-90.2	642.7	608.9	33.79	19.022		
7,350.0	7,280.9	7,369.9	7,268.8	21.2	19.1	-158.72	-514.9	-90.5	645.2	611.4	33.75	19.118		
7,400.0	7,330.5	7,416.6	7,315.4	21.3	19.2	168.77	-511.6	-91.0	651.2	617.6	33.67	19.343		
7,450.0	7,380.1	7,463.5	7,362.1	21.4	19.2	138.65	-508.1	-91.3	657.0	623.4	33.62	19.540		
7,500.0	7,429.4	7,510.8	7,409.3	21.5	19.2	120.56	-504.6	-91.4	662.6	629.0	33.62	19.706		
7,550.0	7,478.3	7,558.3	7,456.7	21.5	19.2	110.62	-501.0	-91.4	667.8	634.2	33.66	19.840		
7,600.0	7,526.3	7,605.4	7,503.6	21.5	19.2	104.95	-497.5	-91.3	672.8	639.1	33.73	19.949		
7,650.0	7,573.4	7,651.8	7,549.8	21.5	19.2	101.63	-493.9	-91.1	677.7	643.9	33.81	20.042		
7,700.0	7,619.3	7,697.9	7,595.8	21.4	19.2	99.77	-490.5	-90.7	682.6	648.6	33.93	20.117		
7,750.0	7,663.8	7,743.1	7,640.9	21.4	19.3	98.89	-487.8	-90.3	687.5	653.5	34.07	20.183		
7,800.0	7,706.6	7,786.1	7,683.9	21.3	19.3	98.66	-485.9	-89.8	693.0	658.8	34.18	20.273		
7,850.0	7,747.5	7,826.7	7,724.5	21.2	19.4	98.83	-484.7	-89.2	699.1	664.9	34.26	20.409		
7,900.0	7,786.4	7,864.6	7,762.4	21.1	19.4	99.22	-484.1	-88.6	706.4	672.1	34.28	20.606		
7,950.0	7,823.0	7,900.3	7,798.1	21.1	19.5	99.72	-483.9	-88.0	715.1	680.8	34.27	20.866		
8,000.0	7,857.2	7,933.3	7,831.0	21.0	19.5	100.19	-483.9	-87.4	725.4	691.2	34.21	21.208		
8,050.0	7,888.8	7,963.3	7,861.0	20.9	19.6	100.54	-484.1	-86.8	737.7	703.6	34.10	21.631		
8,100.0	7,917.6	7,990.2	7,888.0	20.8	19.6	100.68	-484.4	-86.3	752.1	718.1	33.98	22.133		
8,150.0	7,943.6	8,014.0	7,911.8	20.8	19.6	100.55	-484.8	-85.8	768.8	734.9	33.86	22.701		
8,200.0	7,966.5	8,034.6	7,932.4	20.7	19.7	100.08	-485.2	-85.4	787.7	754.0	33.77	23.324		
8,250.0	7,986.4	8,052.1	7,949.8	20.7	19.7	99.24	-485.6	-85.0	809.0	775.3	33.73	23.983		
8,300.0	8,003.0	8,067.1	7,964.8	20.7	19.7	98.05	-486.0	-84.7	832.5	798.8	33.75	24.664		
8,350.0	8,016.3	8,078.8	7,976.5	20.8	19.7	96.41	-486.3	-84.4	858.1	824.3	33.84	25.359		
8,400.0	8,026.2	8,087.2	7,984.9	20.9	19.8	94.32	-486.5	-84.2	885.7	851.7	33.98	26.067		
8,450.0	8,032.7	8,092.2	7,989.9	21.0	19.8	91.77	-486.6	-84.1	915.0	880.9	34.14	26.799		
8,500.0	8,035.7	8,093.9	7,991.6	21.1	19.8	88.76	-486.7	-84.1	945.8	911.5	34.30	27.577		
8,519.1	8,036.0	8,093.6	7,991.3	21.2	19.8	87.50	-486.7	-84.1	957.9	923.6	34.34	27.893		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29XD (EXISTING) - SYNERGY WELL - GYR														Offset Site Error:	0.0 ft
Survey Program: 100-Geolink 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	21.41	276.5	108.4	298.0						
100.0	100.0	73.5	73.5	0.1	0.1	21.45	276.5	108.6	297.1	296.8	0.25	1,171.135 CC			
200.0	200.0	174.1	174.1	0.3	0.3	21.60	276.5	109.5	297.4	296.8	0.60	492.322 ES			
300.0	300.0	268.0	268.0	0.5	0.5	21.88	276.7	111.1	298.2	297.3	0.95	314.380			
400.0	400.0	358.7	358.5	0.6	0.7	22.52	278.5	115.5	301.9	300.6	1.31	231.111			
500.0	500.0	448.9	448.4	0.8	0.9	154.26	282.1	122.8	309.6	308.0	1.65	187.738			
600.0	600.0	538.1	536.9	1.0	1.1	155.64	287.4	132.7	322.0	319.9	2.01	159.857			
700.0	699.9	626.3	623.9	1.2	1.4	157.28	294.4	145.2	339.3	336.9	2.39	142.123			
800.0	799.7	714.9	710.8	1.4	1.7	159.14	302.6	160.3	361.0	358.3	2.77	130.302			
900.0	899.4	800.0	793.8	1.6	2.1	161.03	311.4	177.1	387.2	384.1	3.15	122.909			
1,000.0	998.9	891.4	882.4	1.8	2.5	163.07	321.6	197.0	417.2	413.6	3.54	117.717			
1,100.0	1,098.3	983.0	971.0	2.1	3.0	164.99	332.0	217.8	449.9	446.0	3.93	114.536			
1,200.0	1,197.4	1,078.4	1,063.1	2.3	3.4	166.87	342.3	240.1	484.7	480.4	4.32	112.244			
1,243.8	1,240.7	1,120.1	1,103.4	2.4	3.6	167.68	346.4	250.0	500.4	495.9	4.49	111.560			
1,300.0	1,296.3	1,173.2	1,154.8	2.6	3.9	168.69	351.5	262.6	520.7	516.0	4.70	110.801			
1,400.0	1,395.3	1,269.6	1,248.0	2.9	4.3	170.38	360.2	285.4	556.7	551.6	5.08	109.474			
1,500.0	1,494.2	1,360.3	1,335.7	3.2	4.8	171.87	367.4	307.3	592.6	587.1	5.46	108.597			
1,600.0	1,593.1	1,447.0	1,419.5	3.5	5.2	173.18	374.4	329.0	629.5	623.6	5.81	108.308			
1,700.0	1,692.0	1,535.4	1,504.6	3.8	5.6	174.34	382.4	351.2	667.4	661.2	6.16	108.277			
1,800.0	1,790.9	1,630.9	1,596.6	4.1	6.1	175.44	391.2	375.1	705.6	699.0	6.53	108.118			
1,900.0	1,889.9	1,731.9	1,694.3	4.4	6.6	176.48	399.6	399.5	742.8	735.9	6.90	107.715			
2,000.0	1,988.8	1,825.4	1,784.8	4.7	7.0	177.34	407.2	421.7	779.7	772.4	7.25	107.564			
2,100.0	2,087.7	1,917.4	1,873.8	5.0	7.5	178.10	414.6	443.5	816.7	809.1	7.60	107.477			
2,200.0	2,186.6	2,009.2	1,962.7	5.3	7.9	178.85	421.6	465.7	853.8	845.9	7.95	107.347 SF			
2,300.0	2,285.5	2,098.2	2,048.7	5.6	8.4	179.55	428.1	487.6	891.3	883.0	8.30	107.385			
2,400.0	2,384.4	2,182.3	2,129.8	5.9	8.8	-179.83	434.5	508.9	929.5	920.8	8.64	107.562			
2,500.0	2,483.4	2,281.6	2,225.5	6.2	9.3	-179.14	441.9	534.2	967.9	958.9	9.01	107.484			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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		
11,500.0	8,036.0	8,244.4	8,055.6	59.9	28.2	89.69	4,019.4	-790.1	970.8	890.0	80.82	12.012		
11,600.0	8,036.0	8,244.4	8,055.6	61.5	28.2	89.69	4,019.4	-790.1	872.5	790.0	82.52	10.573		
11,700.0	8,036.0	8,244.4	8,055.6	63.1	28.2	89.69	4,019.4	-790.1	774.5	690.3	84.22	9.197		
11,800.0	8,036.0	8,244.4	8,055.6	64.8	28.2	89.69	4,019.4	-790.1	677.2	591.3	85.92	7.882		
11,900.0	8,036.0	8,244.4	8,055.6	66.4	28.2	89.69	4,019.4	-790.1	580.8	493.2	87.63	6.628		
12,000.0	8,036.0	8,244.4	8,055.6	68.1	28.2	89.69	4,019.4	-790.1	485.8	396.5	89.34	5.438		
12,100.0	8,036.0	8,244.4	8,055.6	69.8	28.2	89.69	4,019.4	-790.1	393.4	302.3	91.05	4.320		
12,200.0	8,036.0	8,244.4	8,055.6	71.4	28.2	89.69	4,019.4	-790.1	305.7	212.9	92.77	3.295		
12,300.0	8,036.0	8,244.4	8,055.6	73.1	28.2	89.69	4,019.4	-790.1	228.3	133.8	94.48	2.416		
12,400.0	8,036.0	8,244.4	8,055.6	74.8	28.2	89.69	4,019.4	-790.1	175.6	79.4	96.20	1.825		
12,456.5	8,036.0	8,244.4	8,055.6	75.7	28.2	89.69	4,019.4	-790.1	166.2	69.1	97.17	1.711	CC, ES, SF	
12,500.0	8,036.0	8,244.4	8,055.6	76.4	28.2	89.70	4,019.4	-790.1	171.8	73.9	97.92	1.755		
12,559.1	8,036.0	8,244.4	8,055.6	77.4	28.2	89.70	4,019.4	-790.1	195.4	96.4	98.94	1.975		
12,600.0	8,036.0	8,244.5	8,055.6	78.1	28.2	89.70	4,019.4	-790.1	219.4	120.2	99.22	2.211		
12,700.0	8,036.0	8,244.5	8,055.6	79.8	28.2	89.72	4,019.4	-790.1	292.8	193.0	99.86	2.933		
12,809.1	8,036.0	8,244.5	8,055.7	81.6	28.2	89.75	4,019.4	-790.1	385.0	284.6	100.45	3.833		
12,900.0	8,036.0	8,244.6	8,055.7	83.1	28.2	89.76	4,019.4	-790.1	466.7	364.7	102.03	4.575		
13,000.0	8,036.0	8,244.6	8,055.8	84.7	28.2	89.78	4,019.4	-790.1	559.9	456.2	103.77	5.396		
13,100.0	8,036.0	8,244.7	8,055.8	86.4	28.2	89.79	4,019.4	-790.1	655.1	549.6	105.52	6.209		
13,200.0	8,036.0	8,244.7	8,055.9	88.1	28.2	89.81	4,019.4	-790.1	751.6	644.4	107.26	7.007		
13,300.0	8,036.0	8,244.8	8,055.9	89.8	28.2	89.82	4,019.4	-790.1	848.9	739.9	109.01	7.788		
13,400.0	8,036.0	8,244.8	8,056.0	91.4	28.2	89.84	4,019.4	-790.1	946.8	836.0	110.75	8.548		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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 (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	
10,200.0	8,036.0	8,132.9	8,018.4	39.5	21.2	81.36	2,658.3	-755.8	914.4	863.8	50.68	18.044	
10,300.0	8,036.0	8,135.8	8,021.2	41.0	21.2	82.05	2,658.4	-755.7	818.1	765.8	52.38	15.620	
10,359.1	8,036.0	8,137.5	8,022.9	41.9	21.2	82.47	2,658.4	-755.7	761.7	708.3	53.39	14.266	
10,400.0	8,036.0	8,138.7	8,024.1	42.6	21.2	82.60	2,658.5	-755.6	722.8	668.8	54.01	13.384	
10,500.0	8,036.0	8,141.7	8,027.2	44.1	21.2	83.03	2,658.6	-755.5	628.4	572.9	55.53	11.317	
10,600.0	8,036.0	8,144.9	8,030.4	45.6	21.2	83.59	2,658.7	-755.4	535.3	478.2	57.06	9.381	
10,659.1	8,036.0	8,146.9	8,032.3	46.5	21.2	83.99	2,658.7	-755.4	481.2	423.2	57.98	8.299	
10,700.0	8,036.0	8,148.2	8,033.7	47.1	21.2	84.37	2,658.8	-755.3	444.4	385.7	58.69	7.572	
10,800.0	8,036.0	8,151.7	8,037.1	48.7	21.2	85.34	2,658.9	-755.2	358.2	297.8	60.45	5.926	
10,900.0	8,036.0	8,155.2	8,040.6	50.3	21.2	86.34	2,659.0	-755.1	281.3	219.1	62.20	4.522	
11,000.0	8,036.0	8,158.8	8,044.3	51.8	21.2	87.37	2,659.2	-755.0	223.3	159.4	63.95	3.492	
11,096.3	8,036.0	8,162.4	8,047.9	53.4	21.2	88.40	2,659.3	-754.9	201.5	135.9	65.63	3.070 CC	
11,100.0	8,036.0	8,162.6	8,048.0	53.4	21.2	88.44	2,659.3	-754.9	201.5	135.8	65.69	3.068 ES, SF	
11,200.0	8,036.0	8,166.4	8,051.8	55.0	21.2	89.53	2,659.4	-754.8	226.6	159.1	67.43	3.360	
11,300.0	8,036.0	8,170.4	8,055.8	56.6	21.2	90.65	2,659.6	-754.7	286.4	217.2	69.14	4.142	
11,400.0	8,036.0	8,174.4	8,059.9	58.3	21.2	91.81	2,659.7	-754.6	364.2	293.4	70.83	5.142	
11,500.0	8,036.0	8,178.7	8,064.1	59.9	21.2	93.00	2,659.9	-754.5	450.9	378.4	72.50	6.219	
11,600.0	8,036.0	8,183.0	8,068.4	61.5	21.2	94.23	2,660.1	-754.4	542.1	468.0	74.14	7.312	
11,700.0	8,036.0	8,187.5	8,072.9	63.1	21.3	95.49	2,660.3	-754.3	636.0	560.2	75.75	8.396	
11,800.0	8,036.0	8,192.1	8,077.5	64.8	21.3	96.78	2,660.4	-754.2	731.4	654.1	77.31	9.460	
11,900.0	8,036.0	8,196.9	8,082.3	66.4	21.3	98.11	2,660.6	-754.1	827.9	749.1	78.83	10.502	
12,000.0	8,036.0	8,201.9	8,087.3	68.1	21.3	99.47	2,660.9	-753.9	925.1	844.8	80.30	11.521	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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					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	0.05	339.9	0.3	340.1					
100.0	100.0	87.1	87.1	0.1	0.1	0.05	339.9	0.3	339.9	339.7	0.26	1,301.129		
200.0	200.0	184.5	184.5	0.3	0.3	0.02	340.3	0.1	340.3	339.7	0.60	568.236		
300.0	300.0	283.7	283.7	0.5	0.5	-0.10	341.4	-0.6	341.5	340.5	0.95	360.759		
400.0	400.0	384.8	384.8	0.6	0.7	-0.32	342.4	-1.9	342.4	341.1	1.30	263.937		
500.0	500.0	483.2	483.1	0.8	0.8	130.21	343.3	-3.5	343.9	342.3	1.65	208.678		
600.0	600.0	582.9	582.8	1.0	1.0	129.97	344.6	-6.9	347.0	345.0	2.01	172.854		
700.0	699.9	684.0	683.7	1.2	1.2	129.65	345.8	-12.0	350.9	348.6	2.38	147.558		
800.0	799.7	781.2	780.8	1.4	1.4	129.44	347.0	-17.7	356.2	353.5	2.75	129.407		
900.0	899.4	876.3	875.7	1.6	1.6	129.52	349.2	-22.6	363.7	360.5	3.13	116.335		
1,000.0	998.9	971.2	970.4	1.8	1.8	129.87	352.6	-26.9	373.5	370.0	3.51	106.462		
1,100.0	1,098.3	1,065.4	1,064.5	2.1	2.0	130.37	357.2	-31.2	385.7	381.8	3.90	98.903		
1,200.0	1,197.4	1,157.0	1,155.8	2.3	2.2	130.99	363.1	-35.3	400.6	396.3	4.30	93.183		
1,243.8	1,240.7	1,195.9	1,194.5	2.4	2.3	131.23	366.1	-37.4	408.1	403.6	4.48	91.077		
1,300.0	1,296.3	1,241.0	1,239.3	2.6	2.4	131.48	370.2	-40.5	418.6	413.9	4.71	88.918		
1,400.0	1,395.3	1,335.0	1,332.4	2.9	2.6	131.74	380.6	-48.6	439.2	434.0	5.16	85.164		
1,500.0	1,494.2	1,420.8	1,416.9	3.2	2.9	131.76	392.1	-57.5	461.9	456.3	5.60	82.424		
1,600.0	1,593.1	1,508.0	1,502.5	3.5	3.2	131.58	405.5	-68.1	486.7	480.6	6.08	80.080		
1,700.0	1,692.0	1,594.4	1,586.7	3.8	3.5	131.26	420.5	-79.8	513.4	506.8	6.55	78.323		
1,800.0	1,790.9	1,690.3	1,680.0	4.1	3.9	130.92	438.4	-93.1	541.3	534.3	7.07	76.580		
1,900.0	1,889.9	1,778.7	1,765.8	4.4	4.3	130.52	455.1	-106.3	569.5	561.9	7.58	75.143		
2,000.0	1,988.8	1,868.6	1,852.6	4.7	4.7	130.03	473.3	-120.9	599.1	591.0	8.11	73.912		
2,100.0	2,087.7	1,956.9	1,937.6	5.0	5.1	129.54	491.9	-135.7	629.6	620.9	8.63	72.990		
2,200.0	2,186.6	2,036.5	2,014.1	5.3	5.5	129.18	510.0	-148.7	661.6	652.4	9.13	72.498		
2,300.0	2,285.5	2,113.7	2,087.5	5.6	5.9	128.78	529.5	-162.1	696.2	686.6	9.63	72.308		
2,400.0	2,384.4	2,201.3	2,170.3	5.9	6.4	128.27	553.0	-178.5	732.4	722.3	10.17	72.032		
2,500.0	2,483.4	2,308.0	2,271.5	6.2	7.0	127.75	580.9	-197.8	768.0	757.2	10.76	71.348		
2,600.0	2,582.3	2,401.8	2,360.5	6.5	7.6	127.26	604.2	-215.8	802.3	791.0	11.33	70.810		
2,700.0	2,681.2	2,483.5	2,437.8	6.8	8.0	126.87	625.5	-231.4	838.0	826.2	11.85	70.699		
2,800.0	2,780.1	2,589.5	2,538.2	7.1	8.6	126.42	653.3	-251.5	873.9	861.4	12.45	70.162		
2,900.0	2,879.0	2,699.1	2,642.4	7.4	9.2	125.96	679.3	-272.6	907.3	894.2	13.07	69.409		
3,000.0	2,977.9	2,786.9	2,726.1	7.7	9.7	125.63	700.1	-289.5	940.8	927.2	13.60	69.153		
3,100.0	3,076.9	2,884.1	2,818.9	8.0	10.2	125.42	723.9	-306.1	974.8	960.6	14.16	68.857		
8,800.0	8,036.0	8,167.8	8,001.4	22.7	26.4	82.53	1,350.1	-749.8	992.1	952.1	39.96	24.828		
8,859.1	8,036.0	8,169.1	8,002.6	23.1	26.4	82.94	1,350.1	-749.8	933.9	893.3	40.57	23.020		
8,900.0	8,036.0	8,169.9	8,003.5	23.4	26.4	83.23	1,350.1	-749.8	893.7	852.7	41.01	21.790		
9,000.0	8,036.0	8,172.0	8,005.6	24.3	26.4	83.92	1,350.2	-749.8	795.8	753.6	42.18	18.867		
9,100.0	8,036.0	8,174.0	8,007.6	25.2	26.4	84.61	1,350.2	-749.7	698.4	654.9	43.43	16.081		
9,200.0	8,036.0	8,176.1	8,009.6	26.3	26.4	85.30	1,350.3	-749.7	601.8	557.1	44.75	13.448		
9,300.0	8,036.0	8,178.0	8,011.6	27.4	26.4	85.96	1,350.3	-749.7	506.6	460.5	46.14	10.982		
9,400.0	8,036.0	8,178.0	8,011.6	28.6	26.4	85.96	1,350.3	-749.7	413.7	366.2	47.52	8.705		
9,500.0	8,036.0	8,181.9	8,015.5	29.8	26.4	87.28	1,350.4	-749.6	325.0	276.0	49.04	6.627		
9,600.0	8,036.0	8,183.9	8,017.5	31.1	26.4	87.95	1,350.4	-749.6	245.1	194.6	50.55	4.849		
9,700.0	8,036.0	8,185.9	8,019.5	32.4	26.4	88.63	1,350.5	-749.6	185.8	133.7	52.08	3.568		
9,777.8	8,036.0	8,187.5	8,021.1	33.5	26.4	89.17	1,350.5	-749.6	168.8	115.5	53.30	3.167 CC, ES, SF		
9,800.0	8,036.0	8,187.9	8,021.5	33.8	26.4	89.33	1,350.5	-749.6	170.2	116.6	53.64	3.173		
9,900.0	8,036.0	8,190.0	8,023.6	35.2	26.4	90.04	1,350.6	-749.5	208.3	153.1	55.21	3.773		
10,000.0	8,036.0	8,192.2	8,025.7	36.6	26.4	90.76	1,350.6	-749.5	279.0	222.2	56.80	4.912		
10,100.0	8,036.0	8,194.3	8,027.9	38.1	26.4	91.50	1,350.7	-749.5	363.7	305.3	58.39	6.228		
10,200.0	8,036.0	8,196.6	8,030.1	39.5	26.4	92.25	1,350.7	-749.4	454.6	394.6	59.99	7.578		
10,300.0	8,036.0	8,198.8	8,032.4	41.0	26.4	93.02	1,350.8	-749.4	548.7	487.1	61.59	8.908		
10,359.1	8,036.0	8,200.2	8,033.8	41.9	26.4	93.48	1,350.8	-749.4	605.2	542.7	62.54	9.677		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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
10,400.0	8,036.0	8,201.1	8,034.7	42.6	26.4	93.70	1,350.8	-749.4	644.5	581.5	63.03	10.225	
10,500.0	8,036.0	8,203.5	8,037.1	44.1	26.4	94.21	1,350.9	-749.4	741.1	676.9	64.23	11.538	
10,600.0	8,036.0	8,206.0	8,039.6	45.6	26.4	94.63	1,350.9	-749.3	838.1	772.7	65.42	12.811	
10,659.1	8,036.0	8,207.5	8,041.0	46.5	26.4	94.84	1,351.0	-749.3	895.6	829.4	66.12	13.545	
10,700.0	8,036.0	8,208.5	8,042.1	47.1	26.4	95.13	1,351.0	-749.3	935.4	868.6	66.77	14.008	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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 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	6.05	319.9	33.9	322.7					
100.0	100.0	75.1	75.1	0.1	0.1	6.11	319.7	34.2	321.6	321.3	0.26	1,250.065		
200.0	200.0	175.8	175.8	0.3	0.3	6.40	319.3	35.8	321.3	320.7	0.61	527.281		
300.0	300.0	278.4	278.3	0.5	0.5	6.79	318.3	37.9	320.6	319.6	0.96	333.292		
400.0	400.0	378.3	378.2	0.6	0.7	6.75	317.0	37.5	319.2	317.9	1.31	243.859		
500.0	500.0	478.8	478.7	0.8	0.8	137.13	316.1	35.0	318.7	317.0	1.66	192.037		
503.5	503.5	482.3	482.2	0.8	0.8	137.12	316.1	34.9	318.7	317.0	1.67	190.629		
600.0	600.0	581.2	581.0	1.0	1.0	136.81	314.8	31.2	319.0	317.0	2.01	158.329		
700.0	699.9	678.8	678.5	1.2	1.2	136.66	313.5	27.4	320.4	318.0	2.37	135.374		
800.0	799.7	778.0	777.7	1.4	1.4	136.94	312.6	24.8	323.7	321.0	2.72	118.789		
900.0	899.4	876.2	875.9	1.6	1.5	137.54	312.0	23.1	328.6	325.5	3.09	106.461		
1,000.0	998.9	976.1	975.8	1.8	1.7	138.29	311.6	21.2	335.1	331.7	3.46	96.911		
1,100.0	1,098.3	1,076.5	1,076.1	2.1	1.9	139.15	311.0	19.0	342.7	338.9	3.84	89.324		
1,200.0	1,197.4	1,175.4	1,175.0	2.3	2.1	140.13	310.5	16.7	351.8	347.6	4.22	83.369		
1,243.8	1,240.7	1,219.2	1,218.9	2.4	2.2	140.60	310.2	15.7	356.3	351.9	4.39	81.152		
1,300.0	1,296.3	1,275.0	1,274.6	2.6	2.3	141.23	309.9	14.4	362.1	357.5	4.61	78.566		
1,400.0	1,395.3	1,374.6	1,374.2	2.9	2.4	142.30	309.3	12.0	372.6	367.6	5.00	74.566		
1,500.0	1,494.2	1,480.2	1,479.7	3.2	2.6	143.46	307.9	9.9	382.7	377.3	5.40	70.926		
1,600.0	1,593.1	1,588.4	1,587.7	3.5	2.8	144.14	304.6	4.2	390.4	384.6	5.81	67.173		
1,700.0	1,692.0	1,697.7	1,696.4	3.8	3.1	144.26	300.0	-5.7	396.1	389.8	6.25	63.340		
1,800.0	1,790.9	1,803.8	1,801.5	4.1	3.3	143.88	294.1	-19.2	399.7	392.9	6.72	59.489		
1,900.0	1,889.9	1,910.2	1,906.5	4.4	3.6	143.19	287.2	-35.2	401.8	394.5	7.21	55.685		
2,000.0	1,988.8	2,018.3	2,012.7	4.7	4.0	142.31	278.3	-53.2	401.9	394.1	7.75	51.880		
2,100.0	2,087.7	2,122.5	2,114.6	5.0	4.3	141.19	268.8	-72.6	400.7	392.4	8.31	48.198		
2,200.0	2,186.6	2,224.6	2,213.8	5.3	4.7	139.64	258.9	-94.9	398.7	389.7	8.95	44.568		
2,300.0	2,285.5	2,326.5	2,312.2	5.6	5.2	137.72	249.1	-119.5	396.7	387.1	9.63	41.182		
2,400.0	2,384.4	2,429.4	2,411.5	5.9	5.6	135.80	238.1	-144.2	394.0	383.6	10.35	38.051		
2,500.0	2,483.4	2,531.3	2,509.7	6.2	6.1	133.90	226.5	-168.6	391.0	379.9	11.10	35.235		
2,600.0	2,582.3	2,627.2	2,602.2	6.5	6.5	132.15	215.4	-191.0	388.3	376.5	11.83	32.827		
2,700.0	2,681.2	2,721.6	2,693.6	6.8	6.9	130.46	205.6	-212.8	387.3	374.7	12.57	30.812		
2,800.0	2,780.1	2,823.1	2,791.8	7.1	7.4	128.57	195.6	-236.7	387.1	373.7	13.39	28.907		
2,900.0	2,879.0	2,923.0	2,888.0	7.4	7.9	126.54	185.1	-261.3	386.7	372.5	14.23	27.179		
2,968.9	2,947.2	2,991.8	2,954.3	7.6	8.2	125.15	177.7	-278.2	386.7	371.8	14.82	26.085		
3,000.0	2,977.9	3,022.0	2,983.4	7.7	8.3	124.51	174.5	-285.7	386.7	371.6	15.09	25.624		
3,100.0	3,076.9	3,115.0	3,072.8	8.0	8.8	122.50	164.9	-309.5	387.7	371.7	15.95	24.312		
3,200.0	3,175.8	3,158.7	3,115.6	8.3	8.7	122.11	164.4	-317.5	397.1	380.9	16.23	24.469		
3,300.0	3,274.7	3,209.0	3,165.0	8.7	8.7	123.04	172.9	-318.3	420.9	404.4	16.43	25.621		
3,400.0	3,373.6	3,424.7	3,375.1	9.0	9.7	121.60	170.9	-355.2	424.1	406.3	17.77	23.862		
3,500.0	3,472.5	3,525.8	3,472.7	9.3	10.2	119.87	160.6	-379.1	425.6	406.9	18.64	22.831		
3,600.0	3,571.4	3,629.3	3,572.4	9.6	10.7	117.98	148.9	-404.4	426.4	406.9	19.53	21.840		
3,700.0	3,670.4	3,729.4	3,669.4	9.9	11.1	116.45	137.4	-426.6	427.1	406.7	20.36	20.979		
3,800.0	3,769.3	3,829.4	3,766.1	10.2	11.6	114.84	125.8	-449.4	428.0	406.8	21.21	20.177		
3,900.0	3,868.2	3,922.7	3,866.0	10.5	12.1	113.21	114.8	-471.6	429.5	407.5	22.05	19.477		
4,000.0	3,967.1	4,011.1	3,941.1	10.8	12.5	111.60	106.2	-493.9	433.7	410.8	22.87	18.963		
4,100.0	4,066.0	4,108.2	4,034.7	11.1	13.0	109.90	98.5	-518.8	440.2	416.4	23.73	18.551		
4,200.0	4,165.0	4,212.8	4,135.4	11.4	13.5	108.15	89.4	-545.1	446.1	421.5	24.60	18.135		
4,300.0	4,263.9	4,308.2	4,227.9	11.8	13.9	106.80	81.3	-567.5	451.9	426.5	25.38	17.808		
4,400.0	4,362.8	4,400.5	4,317.7	12.1	14.3	105.76	75.4	-587.9	459.4	433.3	26.09	17.612		
4,500.0	4,461.7	4,500.3	4,415.3	12.4	14.7	105.02	71.1	-608.0	468.0	441.2	26.79	17.468		
4,600.0	4,560.6	4,600.8	4,514.0	12.7	15.1	104.46	66.9	-626.9	476.2	448.7	27.46	17.338		
4,700.0	4,659.5	4,697.1	4,608.9	13.0	15.4	104.23	64.2	-642.9	484.7	456.6	28.07	17.266		
4,800.0	4,758.5	4,801.8	4,712.6	13.3	15.7	104.37	62.7	-657.4	493.1	464.5	28.65	17.212		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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 (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	4,857.4	4,914.4	4,824.5	13.6	15.9	104.87	60.3	-669.2	499.5	470.3	29.21	17.104	
5,000.0	4,956.3	5,015.3	4,925.0	13.9	16.1	105.54	57.8	-677.4	504.7	475.0	29.70	16.992	
5,100.0	5,055.2	5,118.0	5,027.4	14.2	16.3	106.34	55.7	-684.6	509.8	479.6	30.19	16.889	
5,200.0	5,154.1	5,224.0	5,133.2	14.5	16.5	107.24	52.5	-690.7	513.7	483.0	30.65	16.758	
5,300.0	5,253.0	5,324.3	5,233.4	14.9	16.7	108.19	49.4	-695.5	517.1	486.0	31.08	16.635	
5,400.0	5,352.0	5,422.6	5,331.5	15.2	16.9	109.21	46.7	-699.1	520.8	489.3	31.49	16.536	
5,500.0	5,450.9	5,523.1	5,432.0	15.5	17.0	110.31	44.4	-702.4	524.7	492.9	31.88	16.459	
5,600.0	5,549.8	5,622.7	5,531.5	15.8	17.1	111.49	42.1	-704.7	528.6	496.4	32.23	16.400	
5,700.0	5,648.7	5,720.9	5,629.7	16.1	17.3	112.70	40.3	-706.3	532.9	500.3	32.57	16.364	
5,800.0	5,747.6	5,818.7	5,727.5	16.4	17.4	113.94	38.7	-707.5	537.6	504.8	32.88	16.352	
5,900.0	5,846.6	5,916.4	5,825.1	16.7	17.5	115.17	37.5	-708.7	542.9	509.7	33.18	16.362	
6,000.0	5,945.5	6,014.7	5,923.5	17.0	17.6	116.40	36.5	-709.8	548.7	515.2	33.47	16.394	
6,100.0	6,044.4	6,113.2	6,021.9	17.3	17.7	117.62	35.7	-710.8	554.8	521.0	33.74	16.441	
6,200.0	6,143.3	6,209.9	6,118.6	17.6	17.8	118.81	35.1	-711.6	561.4	527.4	34.00	16.512	
6,300.0	6,242.2	6,304.0	6,212.7	18.0	18.0	119.98	35.1	-712.2	568.8	534.5	34.25	16.608	
6,400.0	6,341.1	6,402.0	6,310.7	18.3	18.1	121.19	35.6	-712.6	576.8	542.4	34.47	16.734	
6,500.0	6,440.1	6,497.9	6,406.6	18.6	18.2	122.37	36.7	-712.7	585.8	551.1	34.69	16.887	
6,600.0	6,539.0	6,599.7	6,508.4	18.9	18.2	123.66	37.9	-712.2	594.9	560.1	34.86	17.066	
6,700.0	6,637.9	6,700.2	6,608.9	19.2	18.3	125.00	38.7	-710.5	603.9	568.9	35.01	17.249	
6,800.0	6,736.8	6,797.1	6,705.7	19.5	18.4	126.29	39.6	-708.5	613.3	578.1	35.16	17.445	
6,900.0	6,835.7	6,894.0	6,802.6	19.8	18.5	127.55	40.8	-706.3	623.2	588.0	35.29	17.662	
7,000.0	6,934.6	6,991.3	6,899.9	20.1	18.5	128.83	42.2	-703.7	633.7	598.3	35.40	17.902	
7,100.0	7,033.6	7,089.9	6,998.4	20.4	18.6	130.11	43.7	-700.5	644.6	609.1	35.50	18.161	
7,200.0	7,132.5	7,190.8	7,099.3	20.8	18.7	131.42	45.0	-697.0	655.6	620.0	35.58	18.427	
7,300.0	7,231.4	7,290.7	7,199.1	21.1	18.7	132.69	46.0	-693.2	666.6	630.9	35.65	18.697	
7,329.8	7,260.9	7,320.1	7,228.5	21.2	18.7	133.07	46.2	-692.0	669.9	634.2	35.67	18.780	
7,350.0	7,280.9	7,340.1	7,248.4	21.2	18.8	123.59	46.4	-691.2	671.8	636.1	35.70	18.820	
7,400.0	7,330.5	7,389.6	7,297.9	21.3	18.8	92.56	46.8	-688.9	674.3	638.7	35.66	18.911	
7,450.0	7,380.1	7,439.1	7,347.3	21.4	18.8	63.69	47.1	-686.5	673.4	638.0	35.46	18.991	
7,500.0	7,429.4	7,488.6	7,396.7	21.5	18.8	46.64	47.5	-683.9	669.2	634.1	35.10	19.062	
7,550.0	7,478.3	7,537.4	7,445.5	21.5	18.9	37.53	47.7	-681.3	661.6	627.0	34.59	19.124	
7,600.0	7,526.3	7,585.5	7,493.5	21.5	18.9	32.54	48.0	-678.6	650.7	616.8	33.93	19.175	
7,650.0	7,573.4	7,632.6	7,540.6	21.5	18.9	29.81	48.2	-676.0	636.7	603.5	33.13	19.214	
7,700.0	7,619.3	7,678.6	7,586.5	21.4	19.0	28.48	48.3	-673.4	619.5	587.3	32.21	19.234	
7,750.0	7,663.8	7,723.2	7,631.0	21.4	19.0	28.12	48.5	-671.1	599.4	568.3	31.17	19.232	
7,800.0	7,706.6	7,766.1	7,673.9	21.3	19.0	28.53	48.6	-669.0	576.5	546.5	30.03	19.197	
7,850.0	7,747.5	7,807.2	7,714.9	21.2	19.0	29.63	48.8	-667.1	550.9	522.1	28.83	19.108	
7,900.0	7,786.4	7,845.8	7,753.4	21.1	19.1	31.41	48.9	-665.5	522.9	495.3	27.63	18.929	
7,950.0	7,823.0	7,882.2	7,789.8	21.1	19.1	33.91	49.1	-664.0	492.8	466.3	26.48	18.612	
8,000.0	7,857.2	7,916.4	7,824.0	21.0	19.1	37.22	49.3	-662.8	460.7	435.2	25.48	18.080	
8,050.0	7,888.8	7,948.0	7,855.6	20.9	19.2	41.44	49.5	-661.7	427.0	402.2	24.78	17.234	
8,100.0	7,917.6	7,977.1	7,884.7	20.8	19.2	46.65	49.7	-660.8	392.1	367.6	24.51	15.999	
8,150.0	7,943.6	8,003.2	7,910.8	20.8	19.2	52.81	49.9	-660.0	356.6	331.8	24.77	14.394	
8,200.0	7,966.5	8,026.3	7,933.9	20.7	19.2	59.74	50.1	-659.4	321.1	295.5	25.52	12.579	
8,250.0	7,986.4	8,046.4	7,953.9	20.7	19.3	67.02	50.3	-658.8	286.6	260.0	26.56	10.791	
8,300.0	8,003.0	8,063.3	7,970.8	20.7	19.3	74.04	50.4	-658.4	254.4	226.8	27.58	9.222	
8,350.0	8,016.3	8,076.9	7,984.5	20.8	19.3	80.16	50.6	-658.0	226.4	198.0	28.40	7.973	
8,400.0	8,026.2	8,087.3	7,994.8	20.9	19.3	84.84	50.7	-657.7	205.3	176.4	28.96	7.091	
8,450.0	8,032.7	8,094.2	8,001.8	21.0	19.3	87.74	50.8	-657.5	193.9	164.6	29.32	6.613	
8,473.2	8,034.5	8,096.3	8,003.8	21.0	19.3	88.44	50.8	-657.5	192.6	163.1	29.46	6.537 CC, ES, SF	
8,500.0	8,035.7	8,097.7	8,005.3	21.1	19.3	88.72	50.8	-657.4	194.4	164.8	29.59	6.568	
8,519.1	8,036.0	8,098.2	8,005.7	21.2	19.3	88.57	50.8	-657.4	197.8	168.1	29.68	6.664	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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 (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			
8,600.0	8,036.0	8,098.9	8,006.5	21.5	19.3	88.80	50.8	-657.4	229.7	199.6	30.14	7.623			
8,700.0	8,036.0	8,099.9	8,007.4	22.0	19.3	89.08	50.8	-657.4	296.3	265.4	30.86	9.600			
8,800.0	8,036.0	8,100.8	8,008.3	22.7	19.3	89.36	50.8	-657.4	377.8	346.1	31.73	11.906			
8,859.1	8,036.0	8,101.4	8,008.9	23.1	19.3	89.52	50.8	-657.4	429.7	397.4	32.31	13.299			
8,900.0	8,036.0	8,101.8	8,009.3	23.4	19.3	89.64	50.8	-657.3	466.6	433.9	32.74	14.253			
9,000.0	8,036.0	8,102.7	8,010.2	24.3	19.3	89.92	50.9	-657.3	559.2	525.4	33.85	16.520			
9,100.0	8,036.0	8,103.7	8,011.2	25.2	19.3	90.21	50.9	-657.3	654.0	618.9	35.06	18.656			
9,200.0	8,036.0	8,104.6	8,012.2	26.3	19.3	90.49	50.9	-657.3	750.1	713.8	36.33	20.644			
9,300.0	8,036.0	8,105.6	8,013.1	27.4	19.3	90.78	50.9	-657.2	847.1	809.5	37.68	22.484			
9,400.0	8,036.0	8,106.6	8,014.1	28.6	19.3	91.06	50.9	-657.2	944.8	905.7	39.07	24.180			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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				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	9.32	310.4	51.0	314.7					
100.0	100.0	88.2	88.2	0.1	0.1	9.37	310.4	51.2	314.6	314.3	0.27	1,165.221 CC		
200.0	200.0	187.9	187.9	0.3	0.3	9.51	310.4	52.0	314.7	314.1	0.61	517.140 ES		
300.0	300.0	284.2	284.2	0.5	0.5	9.75	310.7	53.4	315.3	314.4	0.95	331.488		
400.0	400.0	375.7	375.7	0.6	0.6	10.08	312.8	55.6	317.9	316.6	1.30	245.201		
500.0	500.0	467.6	467.3	0.8	0.8	141.26	317.2	58.8	323.9	322.3	1.63	198.775		
600.0	600.0	557.0	556.4	1.0	1.0	141.91	323.7	62.7	334.0	332.0	1.97	169.757		
700.0	699.9	643.1	641.9	1.2	1.3	142.69	332.6	67.5	348.8	346.5	2.30	151.532		
800.0	799.7	728.4	726.2	1.4	1.5	143.60	344.6	73.5	368.8	366.1	2.64	139.799		
900.0	899.4	813.0	809.3	1.6	1.8	144.61	358.8	80.6	393.4	390.4	2.98	132.141		
1,000.0	998.9	897.6	891.8	1.8	2.2	145.74	375.2	89.4	422.5	419.2	3.32	127.305		
1,100.0	1,098.3	987.5	979.1	2.1	2.6	146.98	394.0	99.8	455.0	451.3	3.67	123.889		
1,200.0	1,197.4	1,077.0	1,065.9	2.3	3.0	148.24	412.6	111.0	489.3	485.3	4.03	121.558		
1,243.8	1,240.7	1,110.3	1,098.1	2.4	3.1	148.68	420.0	115.4	505.5	501.3	4.17	121.240		
1,300.0	1,296.3	1,152.9	1,139.1	2.6	3.3	149.32	430.1	121.1	527.4	523.0	4.35	121.145		
1,400.0	1,395.3	1,236.8	1,219.5	2.9	3.8	150.37	451.3	132.0	567.7	563.0	4.69	121.137		
1,500.0	1,494.2	1,318.3	1,297.3	3.2	4.2	151.13	473.4	141.9	609.4	604.4	5.01	121.595		
1,600.0	1,593.1	1,401.5	1,376.5	3.5	4.7	151.74	497.2	151.6	652.5	647.2	5.34	122.160		
1,700.0	1,692.0	1,490.9	1,461.3	3.8	5.2	152.36	523.2	162.7	696.2	690.6	5.68	122.523		
1,800.0	1,790.9	1,581.4	1,547.2	4.1	5.7	153.01	548.9	174.9	739.9	733.8	6.02	122.848		
1,900.0	1,889.9	1,685.1	1,645.8	4.4	6.3	153.65	577.9	188.3	783.0	776.6	6.38	122.719		
2,000.0	1,988.8	1,795.6	1,751.8	4.7	6.8	154.18	606.8	200.8	824.0	817.2	6.75	122.075		
2,100.0	2,087.7	1,881.1	1,834.0	5.0	7.3	154.53	628.6	209.9	864.1	857.0	7.08	121.977		
2,200.0	2,186.6	1,993.0	1,941.7	5.3	7.8	155.06	655.7	223.1	903.7	896.2	7.46	121.145		
2,300.0	2,285.5	2,075.3	2,021.1	5.6	8.2	155.49	674.5	233.3	942.4	934.6	7.79	121.030 SF		
2,400.0	2,384.4	2,156.9	2,099.7	5.9	8.6	155.83	694.5	243.3	982.4	974.3	8.11	121.095		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	29.15	256.1	142.8	294.2						
100.0	100.0	76.5	76.5	0.1	0.1	29.15	256.1	142.8	293.3	293.0	0.26	1,135.111			
200.0	200.0	176.5	176.5	0.3	0.3	29.15	256.1	142.8	293.3	292.7	0.61	482.836			
300.0	300.0	276.5	276.5	0.5	0.5	29.15	256.1	142.8	293.3	292.3	0.96	306.619			
400.0	400.0	376.5	376.5	0.6	0.7	29.15	256.1	142.8	293.3	292.0	1.31	224.635 CC, ES			
500.0	500.0	476.5	476.5	0.8	0.8	159.91	256.1	142.8	294.1	292.4	1.65	177.748			
600.0	600.0	576.5	576.5	1.0	1.0	160.07	256.1	142.8	296.5	294.5	2.00	148.017			
700.0	699.9	676.4	676.4	1.2	1.2	160.34	256.1	142.8	300.6	298.3	2.35	127.798			
800.0	799.7	776.2	776.2	1.4	1.4	160.71	256.1	142.8	306.4	303.7	2.70	113.403			
900.0	899.4	875.9	875.9	1.6	1.5	161.16	256.1	142.8	313.8	310.8	3.05	102.837			
1,000.0	998.9	975.4	975.4	1.8	1.7	161.68	256.1	142.8	322.9	319.5	3.40	94.927			
1,100.0	1,098.3	1,075.3	1,075.3	2.1	1.9	162.43	255.6	143.6	333.6	329.9	3.75	88.893			
1,200.0	1,197.4	1,174.8	1,174.7	2.3	2.1	163.77	253.0	147.2	345.9	341.8	4.11	84.232			
1,243.8	1,240.7	1,218.1	1,217.9	2.4	2.1	164.52	251.3	149.6	351.8	347.6	4.26	82.535			
1,300.0	1,296.3	1,273.4	1,273.0	2.6	2.2	165.63	248.6	153.5	359.7	355.3	4.47	80.488			
1,400.0	1,395.3	1,371.1	1,370.1	2.9	2.5	167.88	242.2	162.4	374.2	369.4	4.85	77.163			
1,500.0	1,494.2	1,467.7	1,465.7	3.2	2.7	170.42	234.1	173.9	389.4	384.2	5.25	74.146			
1,600.0	1,593.1	1,563.2	1,559.5	3.5	3.0	173.18	224.2	187.8	405.8	400.1	5.68	71.472			
1,700.0	1,692.0	1,659.5	1,654.1	3.8	3.2	175.95	213.4	203.0	423.3	417.2	6.13	69.090			
1,800.0	1,790.9	1,755.9	1,748.6	4.1	3.5	178.50	202.7	218.2	441.8	435.2	6.59	67.060			
1,900.0	1,889.9	1,852.3	1,843.2	4.4	3.9	-179.14	191.9	233.4	461.0	454.0	7.06	65.327			
2,000.0	1,988.8	1,948.6	1,937.8	4.7	4.2	-176.98	181.1	248.6	481.0	473.5	7.53	63.848			
2,100.0	2,087.7	2,045.0	2,032.3	5.0	4.5	-174.98	170.3	263.8	501.6	493.6	8.01	62.584			
2,200.0	2,186.6	2,141.4	2,126.9	5.3	4.9	-173.14	159.6	279.0	522.7	514.2	8.50	61.501			
2,300.0	2,285.5	2,237.7	2,221.4	5.6	5.2	-171.44	148.8	294.2	544.3	535.4	8.99	60.570			
2,400.0	2,384.4	2,334.1	2,316.0	5.9	5.5	-169.87	138.0	309.4	566.4	556.9	9.48	59.767			
2,500.0	2,483.4	2,430.5	2,410.5	6.2	5.9	-168.41	127.2	324.5	588.9	578.9	9.97	59.071			
2,600.0	2,582.3	2,526.9	2,505.1	6.5	6.2	-167.06	116.5	339.7	611.6	601.2	10.46	58.465			
2,700.0	2,681.2	2,623.2	2,599.6	6.8	6.6	-165.81	105.7	354.9	634.7	623.8	10.96	57.937			
2,800.0	2,780.1	2,719.6	2,694.2	7.1	7.0	-164.64	94.9	370.1	658.1	646.7	11.45	57.475			
2,900.0	2,879.0	2,816.0	2,788.7	7.4	7.3	-163.55	84.1	385.3	681.7	669.8	11.95	57.069			
3,000.0	2,977.9	2,912.3	2,883.3	7.7	7.7	-162.54	73.4	400.5	705.6	693.1	12.44	56.711			
3,100.0	3,076.9	3,008.7	2,977.8	8.0	8.0	-161.59	62.6	415.7	729.6	716.6	12.94	56.394			
3,200.0	3,175.8	3,105.1	3,072.4	8.3	8.4	-160.70	51.8	430.9	753.8	740.4	13.43	56.114			
3,300.0	3,274.7	3,201.4	3,166.9	8.7	8.7	-159.86	41.1	446.1	778.2	764.2	13.93	55.865			
3,400.0	3,373.6	3,297.8	3,261.5	9.0	9.1	-159.08	30.3	461.3	802.7	788.3	14.43	55.643			
3,500.0	3,472.5	3,394.2	3,356.1	9.3	9.5	-158.34	19.5	476.4	827.3	812.4	14.92	55.445			
3,600.0	3,571.4	3,490.6	3,450.6	9.6	9.8	-157.64	8.7	491.6	852.1	836.7	15.42	55.268			
3,700.0	3,670.4	3,586.9	3,545.2	9.9	10.2	-156.98	-2.0	506.8	877.0	861.1	15.91	55.110			
3,800.0	3,769.3	3,683.3	3,639.7	10.2	10.6	-156.36	-12.8	522.0	902.0	885.6	16.41	54.968			
3,900.0	3,868.2	3,779.7	3,734.3	10.5	10.9	-155.77	-23.6	537.2	927.1	910.2	16.91	54.840			
4,000.0	3,967.1	3,876.0	3,828.8	10.8	11.3	-155.22	-34.4	552.4	952.3	934.9	17.40	54.725			
4,100.0	4,066.0	3,972.4	3,923.4	11.1	11.6	-154.69	-45.1	567.6	977.5	959.6	17.90	54.622 SF			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3G-29H-M168 - 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	
8,600.0	8,036.0	7,950.0	7,731.7	21.5	21.3	-74.76	351.3	-1,799.1	993.7	962.5	31.22	31.827		
8,700.0	8,036.0	8,000.0	7,751.3	22.0	21.0	-75.82	397.3	-1,796.9	973.1	941.4	31.66	30.732		
8,800.0	8,036.0	8,050.0	7,766.8	22.7	20.8	-76.67	444.8	-1,795.1	957.0	924.7	32.25	29.672		
8,859.1	8,036.0	8,100.0	7,778.1	23.1	20.6	-77.28	493.4	-1,793.9	949.4	916.8	32.57	29.149		
8,900.0	8,036.0	8,119.1	7,781.3	23.4	20.6	-77.46	512.2	-1,793.5	944.9	912.0	32.90	28.724		
9,000.0	8,036.0	8,184.1	7,787.6	24.3	20.4	-77.77	576.9	-1,792.8	936.7	903.0	33.70	27.796		
9,100.0	8,036.0	8,272.1	7,788.0	25.2	20.2	-77.74	664.9	-1,792.8	931.3	896.7	34.60	26.919		
9,200.0	8,036.0	8,372.0	7,788.0	26.3	20.2	-77.67	764.8	-1,792.7	926.2	890.5	35.71	25.940		
9,300.0	8,036.0	8,471.8	7,788.0	27.4	20.3	-77.60	864.6	-1,792.7	921.1	884.0	37.11	24.822		
9,400.0	8,036.0	8,571.7	7,788.0	28.6	20.6	-77.53	964.5	-1,792.7	916.0	877.2	38.72	23.656		
9,500.0	8,036.0	8,671.5	7,788.0	29.8	21.0	-77.46	1,064.3	-1,792.7	910.8	870.3	40.58	22.448		
9,600.0	8,036.0	8,771.4	7,788.0	31.1	21.5	-77.39	1,164.2	-1,792.7	905.7	863.1	42.64	21.241		
9,700.0	8,036.0	8,871.3	7,788.0	32.4	22.2	-77.32	1,264.1	-1,792.7	900.6	855.7	44.89	20.063		
9,800.0	8,036.0	8,971.1	7,788.0	33.8	23.0	-77.24	1,363.9	-1,792.7	895.5	848.2	47.29	18.936		
9,900.0	8,036.0	9,071.0	7,788.0	35.2	23.9	-77.17	1,463.8	-1,792.7	890.4	840.5	49.83	17.869		
10,000.0	8,036.0	9,170.9	7,788.0	36.6	24.9	-77.09	1,563.7	-1,792.7	885.3	832.8	52.47	16.870		
10,100.0	8,036.0	9,270.7	7,788.0	38.1	25.9	-77.02	1,663.5	-1,792.6	880.2	824.9	55.22	15.940		
10,200.0	8,036.0	9,370.6	7,788.0	39.5	27.1	-76.94	1,763.4	-1,792.6	875.0	817.0	58.04	15.078		
10,300.0	8,036.0	9,470.4	7,788.0	41.0	28.3	-76.86	1,863.2	-1,792.6	869.9	809.0	60.92	14.280		
10,359.1	8,036.0	9,529.5	7,788.0	41.9	29.0	-76.81	1,922.3	-1,792.6	866.9	804.3	62.65	13.836		
10,400.0	8,036.0	9,570.3	7,788.0	42.6	29.5	-76.79	1,963.1	-1,792.6	865.0	801.1	63.85	13.547		
10,500.0	8,036.0	9,670.2	7,788.0	44.1	30.8	-76.74	2,063.0	-1,792.6	861.4	794.6	66.81	12.893		
10,600.0	8,036.0	9,770.2	7,788.0	45.6	32.2	-76.72	2,163.0	-1,792.6	859.5	789.7	69.82	12.311		
10,659.1	8,036.0	9,829.4	7,788.0	46.5	33.0	-76.71	2,222.2	-1,792.6	859.2	787.6	71.61	11.999		
10,700.0	8,036.0	9,870.2	7,788.0	47.1	33.6	-76.71	2,263.0	-1,792.6	859.2	786.4	72.87	11.791		
10,800.0	8,036.0	9,970.2	7,788.0	48.7	35.0	-76.71	2,363.0	-1,792.6	859.2	783.2	76.00	11.306		
10,900.0	8,036.0	10,070.2	7,788.0	50.3	36.4	-76.71	2,463.0	-1,792.6	859.2	780.1	79.14	10.856		
11,000.0	8,036.0	10,170.2	7,788.0	51.8	37.9	-76.71	2,563.0	-1,792.6	859.2	776.9	82.32	10.438		
11,100.0	8,036.0	10,270.2	7,788.0	53.4	39.4	-76.71	2,663.0	-1,792.5	859.2	773.7	85.51	10.048		
11,200.0	8,036.0	10,370.2	7,788.0	55.0	40.9	-76.71	2,763.0	-1,792.5	859.2	770.5	88.72	9.685		
11,300.0	8,036.0	10,470.2	7,788.0	56.6	42.5	-76.71	2,863.0	-1,792.5	859.2	767.2	91.94	9.345		
11,400.0	8,036.0	10,570.2	7,788.0	58.3	44.0	-76.71	2,963.0	-1,792.5	859.2	764.0	95.18	9.027		
11,500.0	8,036.0	10,670.2	7,788.0	59.9	45.6	-76.71	3,063.0	-1,792.5	859.2	760.7	98.43	8.729		
11,600.0	8,036.0	10,770.2	7,788.0	61.5	47.1	-76.71	3,163.0	-1,792.5	859.1	757.5	101.69	8.448		
11,700.0	8,036.0	10,870.2	7,788.0	63.1	48.7	-76.71	3,263.0	-1,792.5	859.1	754.2	104.97	8.185		
11,800.0	8,036.0	10,970.2	7,788.0	64.8	50.3	-76.71	3,363.0	-1,792.5	859.1	750.9	108.25	7.937		
11,900.0	8,036.0	11,070.2	7,788.0	66.4	52.0	-76.71	3,463.0	-1,792.5	859.1	747.6	111.54	7.702		
12,000.0	8,036.0	11,170.2	7,788.0	68.1	53.6	-76.71	3,563.0	-1,792.5	859.1	744.3	114.84	7.481		
12,100.0	8,036.0	11,270.2	7,788.0	69.8	55.2	-76.71	3,663.0	-1,792.4	859.1	741.0	118.14	7.272		
12,200.0	8,036.0	11,370.2	7,788.0	71.4	56.8	-76.71	3,763.0	-1,792.4	859.1	737.6	121.45	7.073		
12,300.0	8,036.0	11,470.2	7,788.0	73.1	58.5	-76.71	3,863.0	-1,792.4	859.1	734.3	124.77	6.885		
12,400.0	8,036.0	11,570.2	7,788.0	74.8	60.1	-76.71	3,963.0	-1,792.4	859.1	731.0	128.09	6.707		
12,500.0	8,036.0	11,670.2	7,788.0	76.4	61.8	-76.71	4,063.0	-1,792.4	859.1	727.6	131.42	6.537		
12,559.1	8,036.0	11,729.4	7,788.0	77.4	62.8	-76.71	4,122.2	-1,792.4	859.0	725.7	133.39	6.440		
12,559.4	8,036.0	11,729.7	7,788.0	77.4	62.8	-76.71	4,122.5	-1,792.4	859.0	725.6	133.40	6.440 CC		
12,600.0	8,036.0	11,770.2	7,788.0	78.1	63.5	-76.71	4,163.0	-1,792.4	859.3	724.6	134.71	6.379		
12,700.0	8,036.0	11,870.2	7,788.0	79.8	65.1	-76.75	4,263.0	-1,792.4	862.4	724.6	137.84	6.257 ES		
12,809.1	8,036.0	11,979.0	7,788.0	81.6	66.9	-76.82	4,371.8	-1,792.4	869.6	728.5	141.10	6.163		
12,900.0	8,036.0	12,069.6	7,788.0	83.1	68.4	-76.94	4,462.4	-1,792.4	877.3	733.1	144.20	6.084		
13,000.0	8,036.0	12,169.2	7,788.0	84.7	70.1	-77.07	4,562.0	-1,792.3	885.8	738.1	147.62	6.000		
13,100.0	8,036.0	12,268.8	7,788.0	86.4	71.8	-77.19	4,661.6	-1,792.3	894.2	743.1	151.04	5.920		
13,200.0	8,036.0	12,368.4	7,788.0	88.1	73.5	-77.31	4,761.3	-1,792.3	902.5	748.0	154.47	5.843		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design		S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3G-29H-M168 - Hz - Plan #1										Offset Site Error:		0.0 ft			
Survey Program:		0-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	+N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)						
13,300.0	8,036.0	12,468.1	7,788.0	89.8	75.2	-77.43	4,860.9	-1,792.3		910.8	752.9	157.89	5.769				
13,400.0	8,036.0	12,567.7	7,788.0	91.4	76.8	-77.55	4,960.5	-1,792.3		919.1	757.8	161.33	5.697				
13,500.0	8,036.0	12,667.4	7,788.0	93.1	78.5	-77.66	5,060.2	-1,792.3		927.4	762.6	164.76	5.629				
13,600.0	8,036.0	12,767.0	7,788.0	94.8	80.2	-77.77	5,159.8	-1,792.3		935.6	767.4	168.20	5.562				
13,700.0	8,036.0	12,866.7	7,788.0	96.5	81.9	-77.88	5,259.5	-1,792.3		943.8	772.1	171.64	5.499				
13,800.0	8,036.0	12,966.3	7,788.0	98.2	83.6	-77.99	5,359.1	-1,792.3		951.9	776.9	175.09	5.437				
13,900.0	8,036.0	13,066.0	7,788.0	99.9	85.3	-78.09	5,458.8	-1,792.3		960.1	781.5	178.54	5.377				
14,000.0	8,036.0	13,165.6	7,788.0	101.6	87.0	-78.19	5,558.4	-1,792.2		968.1	786.1	181.99	5.320				
14,100.0	8,036.0	13,265.3	7,788.0	103.2	88.7	-78.29	5,658.1	-1,792.2		976.2	790.7	185.44	5.264				
14,200.0	8,036.0	13,365.0	7,788.0	104.9	90.4	-78.39	5,757.8	-1,792.2		984.2	795.3	188.90	5.210				
14,300.0	8,036.0	13,464.6	7,788.0	106.6	92.1	-78.48	5,857.4	-1,792.2		992.2	799.8	192.35	5.158 SF				

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - WILLIAM H PELTIER 1 (EXISTING) - VESSELS WELL - N											Offset Site Error:		0.0 ft	
Survey Program: 8517-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		
16,500.0	8,036.0	8,017.5	8,017.5	144.6	14.0	90.00	8,628.6	-1.7	941.2	783.2	157.99	5.958		
16,600.0	8,036.0	8,017.5	8,017.5	146.3	14.0	90.00	8,628.6	-1.7	884.0	724.2	159.73	5.534		
16,700.0	8,036.0	8,017.5	8,017.5	148.0	14.0	90.00	8,628.6	-1.7	834.8	673.3	161.48	5.170		
16,800.0	8,036.0	8,017.5	8,017.5	149.8	14.0	90.00	8,628.6	-1.7	795.2	632.0	163.22	4.872		
16,900.0	8,036.0	8,017.5	8,017.5	151.5	14.0	90.00	8,628.6	-1.7	766.7	601.8	164.96	4.648		
17,000.0	8,036.0	8,017.5	8,017.5	153.3	14.0	90.00	8,628.6	-1.7	750.6	583.9	166.71	4.502		
17,072.6	8,036.0	8,017.5	8,017.5	154.5	14.0	90.00	8,628.6	-1.7	747.1	579.1	167.98	4.447 CC, ES		
17,100.0	8,036.0	8,017.5	8,017.5	155.0	14.0	90.00	8,628.6	-1.7	747.6	579.1	168.45	4.438 SF		
17,200.0	8,036.0	8,017.5	8,017.5	156.7	14.0	90.00	8,628.6	-1.7	757.8	587.6	170.20	4.453		
17,300.0	8,036.0	8,017.5	8,017.5	158.5	14.0	90.00	8,628.6	-1.7	780.9	609.0	171.95	4.542		
17,400.0	8,036.0	8,017.5	8,017.5	160.2	14.0	90.00	8,628.6	-1.7	815.7	642.0	173.69	4.696		
17,500.0	8,036.0	8,017.5	8,017.5	162.0	14.0	90.00	8,628.6	-1.7	860.7	685.3	175.44	4.906		
17,600.0	8,036.0	8,017.5	8,017.5	163.7	14.0	90.00	8,628.6	-1.7	914.5	737.3	177.18	5.161		
17,700.0	8,036.0	8,017.5	8,017.5	165.4	14.0	90.00	8,628.6	-1.7	975.6	796.7	178.93	5.452		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	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		
16,200.0	8,036.0	9,684.9	7,730.8	139.4	48.6	-38.79	8,688.2	-970.4	998.7	892.5	106.20	9.404		
16,300.0	8,036.0	9,668.0	7,730.4	141.1	48.2	-36.61	8,692.0	-954.0	905.7	802.7	103.02	8.791		
16,400.0	8,036.0	9,652.6	7,729.9	142.8	47.9	-34.50	8,695.7	-939.0	813.9	714.1	99.81	8.154		
16,500.0	8,036.0	9,636.0	7,729.2	144.6	47.5	-32.11	8,699.6	-922.9	723.7	627.8	95.82	7.552		
16,600.0	8,036.0	9,615.5	7,728.2	146.3	47.0	-28.99	8,704.7	-903.0	635.7	545.6	90.04	7.060		
16,700.0	8,036.0	9,595.5	7,727.0	148.0	46.6	-25.75	8,709.6	-883.7	550.9	467.2	83.77	6.577		
16,800.0	8,036.0	9,573.0	7,725.6	149.8	46.0	-21.93	8,715.3	-862.0	471.1	395.2	75.96	6.202		
16,900.0	8,036.0	9,545.6	7,724.0	151.5	45.4	-17.05	8,722.3	-835.6	398.9	333.2	65.71	6.070		
17,000.0	8,036.0	9,521.0	7,722.6	153.3	44.8	-12.49	8,728.6	-811.8	339.0	282.4	56.53	5.996 SF		
17,100.0	8,036.0	9,495.8	7,721.2	155.0	44.3	-7.71	8,735.3	-787.6	299.0	250.9	48.08	6.219		
17,187.0	8,036.0	9,472.6	7,719.9	156.5	43.7	-3.25	8,741.6	-765.2	287.0	244.3	42.70	6.722 CC, ES		
17,200.0	8,036.0	9,469.0	7,719.7	156.7	43.6	-2.57	8,742.6	-761.8	287.3	245.1	42.20	6.808		
17,300.0	8,036.0	9,440.7	7,718.2	158.5	43.0	2.84	8,750.5	-734.7	306.9	264.6	42.31	7.253		
17,400.0	8,036.0	9,413.1	7,716.7	160.2	42.4	8.01	8,758.3	-708.2	352.4	303.8	48.65	7.245		
17,500.0	8,036.0	9,386.3	7,715.3	162.0	41.7	12.87	8,765.7	-682.5	415.6	357.5	58.14	7.148		
17,600.0	8,036.0	9,360.1	7,714.0	163.7	41.1	17.39	8,772.9	-657.4	489.7	421.1	68.63	7.136		
17,700.0	8,036.0	9,330.0	7,712.5	165.4	40.5	22.31	8,781.0	-628.4	570.5	489.6	80.89	7.052		
17,800.0	8,036.0	9,296.9	7,711.5	167.2	39.7	27.33	8,790.0	-596.6	655.2	561.4	93.79	6.986		
17,902.0	8,036.0	9,262.7	7,711.0	169.0	38.9	32.10	8,799.4	-563.7	744.4	638.2	106.20	7.009		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - WILLIAM PELTIER 4-2-20 (EXISTING) - ENCANA WELL													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		
16,500.0	8,036.0	8,328.0	7,923.5	144.6	42.6	-90.00	8,655.2	-1,495.2	958.9	796.7	162.24	5.911		
16,600.0	8,036.0	8,328.0	7,923.5	146.3	42.6	-90.00	8,655.2	-1,495.2	899.5	735.5	163.98	5.485		
16,700.0	8,036.0	8,328.0	7,923.5	148.0	42.6	-90.00	8,655.2	-1,495.2	847.8	682.0	165.73	5.115		
16,800.0	8,036.0	8,328.0	7,923.5	149.8	42.6	-90.00	8,655.2	-1,495.2	805.2	637.7	167.47	4.808		
16,900.0	8,036.0	8,328.0	7,923.5	151.5	42.6	-90.00	8,655.2	-1,495.2	773.2	604.0	169.21	4.570		
17,000.0	8,036.0	8,328.0	7,923.5	153.3	42.6	-90.00	8,655.2	-1,495.2	753.3	582.3	170.96	4.406		
17,100.0	8,036.0	8,328.0	7,923.5	155.0	42.6	-90.00	8,655.2	-1,495.2	746.4	573.7	172.70	4.322		
17,102.1	8,036.0	8,328.0	7,923.5	155.0	42.6	-90.00	8,655.2	-1,495.2	746.4	573.6	172.74	4.321	CC, ES	
17,200.0	8,036.0	8,328.0	7,923.5	156.7	42.6	-90.00	8,655.2	-1,495.2	752.8	578.3	174.45	4.315	SF	
17,300.0	8,036.0	8,328.0	7,923.5	158.5	42.6	-90.00	8,655.2	-1,495.2	772.2	596.0	176.20	4.382		
17,400.0	8,036.0	8,328.0	7,923.5	160.2	42.6	-90.00	8,655.2	-1,495.2	803.6	625.7	177.94	4.516		
17,500.0	8,036.0	8,328.0	7,923.5	162.0	42.6	-90.00	8,655.2	-1,495.2	845.8	666.1	179.69	4.707		
17,600.0	8,036.0	8,328.0	7,923.5	163.7	42.6	-90.00	8,655.2	-1,495.2	897.2	715.8	181.43	4.945		
17,700.0	8,036.0	8,328.0	7,923.5	165.4	42.6	-90.00	8,655.2	-1,495.2	956.3	773.2	183.18	5.221		

Cathedral Energy Services

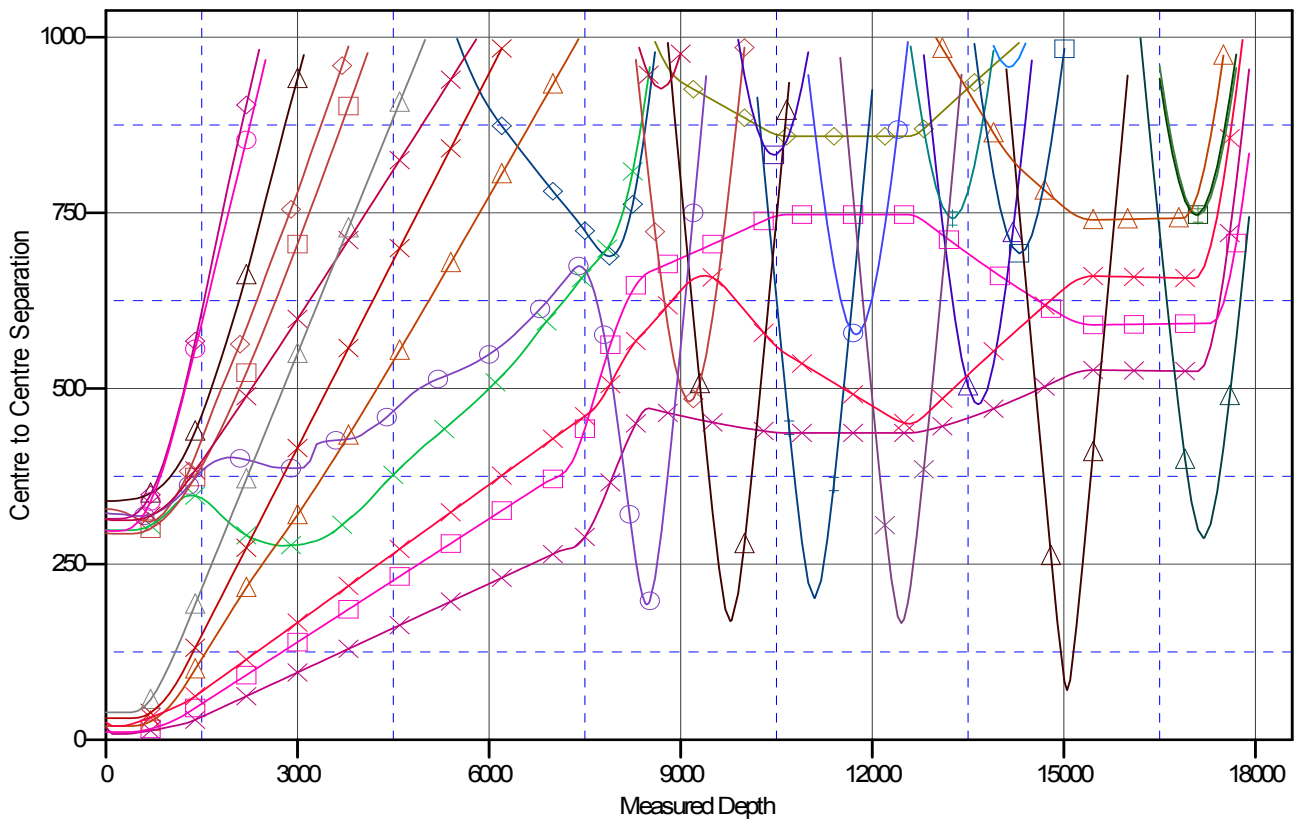
Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Pratt 4C-29H-P168
Project:	DJ Wattenberg	TVD Reference:	28.5' KB @ 5204.5ft (Patt 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	28.5' KB @ 5204.5ft (Patt 272)
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 #4	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 28.5' KB @ 5204.5ft (Patt 272)
 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°

Ladder Plot



LEGEND

V0	COSTIGAN 6-8-20 (EXISTING), ENCANA WELL, SURVEYS V0	Pratt 4F-29H-P168, Hz, Plan #2 V0
SYNERGY WELL, PLAN ONLY V0	SRC PRATT 29PD (EXISTING), SYNERGY WELL, SURVEYS V0	Pratt 4E-29H-P168, Hz, Plan #3 V0
38, Hz, Plan #1 V0	SRC PRATT 33-29PD (EXISTING), SYNERGY WELL, SURVEYS V0	COSTIGAN 4-6-20 (EXISTING), ENI
), SYNERGY WELL, SURVEYS V0	PRATT 4-2-29 (EXISTING), ENCANA WELL, SURVEYS V0	SRC PRATT 29XD (EXISTING), SY
STING), ENCANA WELL, PLAN ONLY V0	SRC PRATT 31-29D (EXISTING), SYNERGY WELL, SURVEYS V0	SRC PRATT 44-29D (EXISTING), S
VD), VESSELS WELL, NOSURVEYS V0	EDWARD P COSTIGAN 1 (EXISTING), ENCANA WELL, SURVEYS V0	PRATT 29-3 (EXISTING), SYNERG
V0	COSTIGAN 33-20 (EXISTING), ENCANA WELL, ENCANA WELL V0	Pratt 4G-29H-P168, Hz, Plan #3 V0
SYNERGY WELL, SURVEYS V0	SRC PRATT 34-29D (EXISTING), SYNERGY WELL, SURVEYS V0	Pratt 4A-29H-P168 (DROP), Hz, Pla
ISTING), ENCANA WELL, SURVEYS V0	SRC PRATT 29SD (EXISTING), SYNERGY WELL, SURVEYS V0	

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