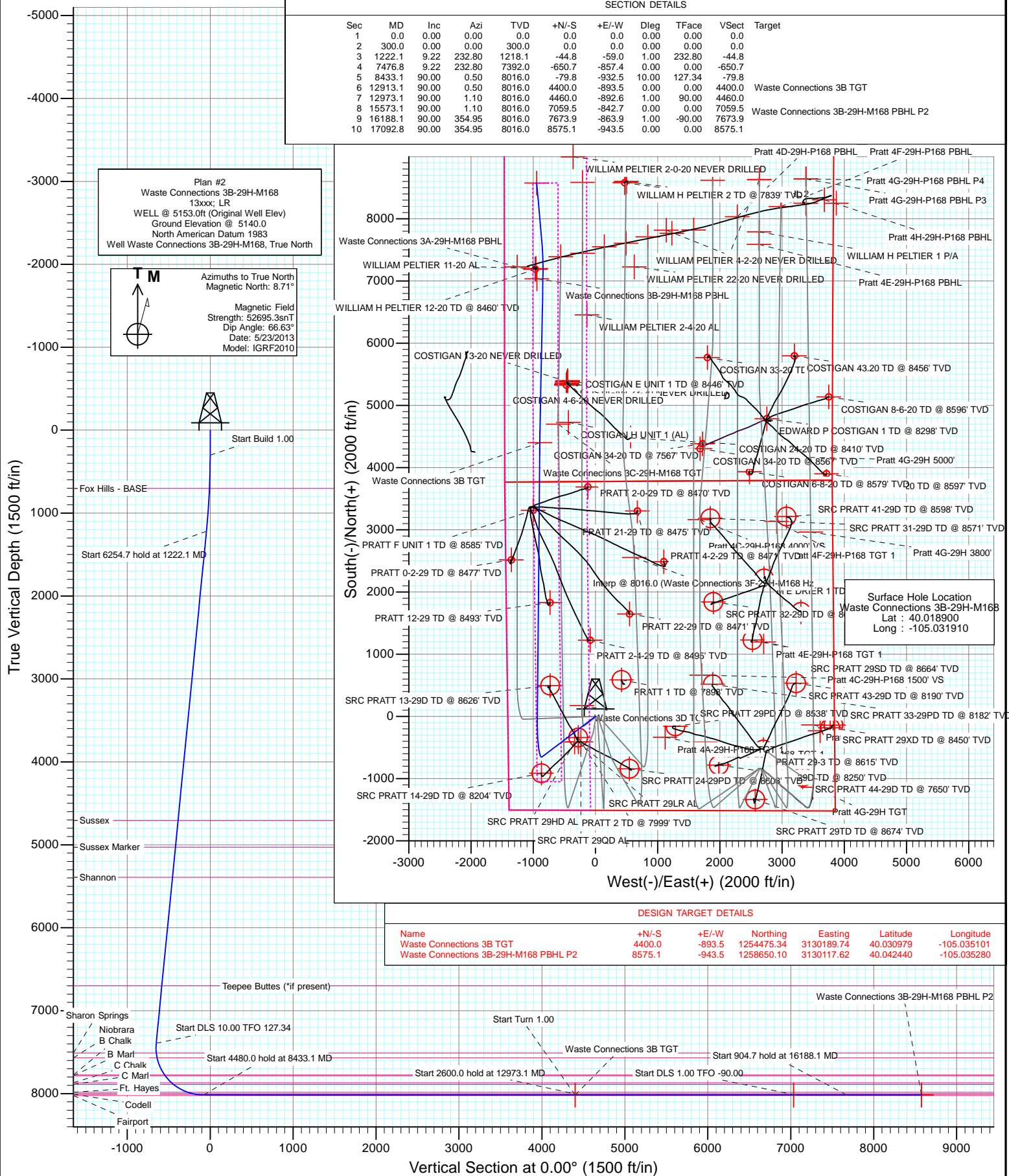




Project: DJ Wattenberg
Site: S29-T1N-R68W (Pratt/Waste Connections)
Well: Waste Connections 3B-29H-M168
Wellbore: HZ
Design: Plan #2



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

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

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

Well	Waste Connections 3B-29H-M168					
Well Position	+N/-S	0.0 ft	Northing:	1,250,080.12 ft	Latitude:	40.018900
	+E/-W	0.0 ft	Easting:	3,131,106.41 ft	Longitude:	-105.031910
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,140.0 ft

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

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,222.1	9.22	232.80	1,218.1	-44.8	-59.0	1.00	1.00	0.00	232.80	
7,476.8	9.22	232.80	7,392.0	-650.7	-857.4	0.00	0.00	0.00	0.00	
8,433.1	90.00	0.50	8,016.0	-79.8	-932.5	10.00	8.45	13.35	127.34	
12,913.1	90.00	0.50	8,016.0	4,400.0	-893.5	0.00	0.00	0.00	0.00	Waste Connections 3I
12,973.1	90.00	1.10	8,016.0	4,460.0	-892.6	1.00	0.00	1.00	90.00	
15,573.1	90.00	1.10	8,016.0	7,059.5	-842.7	0.00	0.00	0.00	0.00	
16,188.1	90.00	354.95	8,016.0	7,673.9	-863.9	1.00	0.00	-1.00	-90.00	
17,092.8	90.00	354.95	8,016.0	8,575.1	-943.5	0.00	0.00	0.00	0.00	Waste Connections 3I

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	Start Build 1.00
400.0	1.00	232.80	400.0	-0.5	-0.7	-0.5	1.00	1.00	
500.0	2.00	232.80	500.0	-2.1	-2.8	-2.1	1.00	1.00	
600.0	3.00	232.80	599.9	-4.7	-6.3	-4.7	1.00	1.00	
700.0	4.00	232.80	699.7	-8.4	-11.1	-8.4	1.00	1.00	
703.3	4.03	232.80	703.0	-8.6	-11.3	-8.6	1.00	1.00	Fox Hills - BASE
800.0	5.00	232.80	799.4	-13.2	-17.4	-13.2	1.00	1.00	
900.0	6.00	232.80	898.9	-19.0	-25.0	-19.0	1.00	1.00	
1,000.0	7.00	232.80	998.3	-25.8	-34.0	-25.8	1.00	1.00	
1,100.0	8.00	232.80	1,097.4	-33.7	-44.4	-33.7	1.00	1.00	
1,200.0	9.00	232.80	1,196.3	-42.6	-56.2	-42.6	1.00	1.00	
1,222.1	9.22	232.80	1,218.1	-44.8	-59.0	-44.8	1.00	1.00	Start 6254.7 hold at 1222.1 MD
1,300.0	9.22	232.80	1,295.0	-52.3	-68.9	-52.3	0.00	0.00	
1,400.0	9.22	232.80	1,393.7	-62.0	-81.7	-62.0	0.00	0.00	
1,500.0	9.22	232.80	1,492.4	-71.7	-94.5	-71.7	0.00	0.00	
1,600.0	9.22	232.80	1,591.1	-81.4	-107.2	-81.4	0.00	0.00	
1,700.0	9.22	232.80	1,689.8	-91.1	-120.0	-91.1	0.00	0.00	
1,800.0	9.22	232.80	1,788.6	-100.7	-132.7	-100.7	0.00	0.00	
1,900.0	9.22	232.80	1,887.3	-110.4	-145.5	-110.4	0.00	0.00	
2,000.0	9.22	232.80	1,986.0	-120.1	-158.3	-120.1	0.00	0.00	
2,100.0	9.22	232.80	2,084.7	-129.8	-171.0	-129.8	0.00	0.00	
2,200.0	9.22	232.80	2,183.4	-139.5	-183.8	-139.5	0.00	0.00	
2,300.0	9.22	232.80	2,282.1	-149.2	-196.6	-149.2	0.00	0.00	
2,400.0	9.22	232.80	2,380.8	-158.9	-209.3	-158.9	0.00	0.00	
2,500.0	9.22	232.80	2,479.5	-168.6	-222.1	-168.6	0.00	0.00	
2,600.0	9.22	232.80	2,578.2	-178.2	-234.9	-178.2	0.00	0.00	
2,700.0	9.22	232.80	2,676.9	-187.9	-247.6	-187.9	0.00	0.00	
2,800.0	9.22	232.80	2,775.6	-197.6	-260.4	-197.6	0.00	0.00	
2,900.0	9.22	232.80	2,874.3	-207.3	-273.2	-207.3	0.00	0.00	
3,000.0	9.22	232.80	2,973.0	-217.0	-285.9	-217.0	0.00	0.00	
3,100.0	9.22	232.80	3,071.8	-226.7	-298.7	-226.7	0.00	0.00	
3,200.0	9.22	232.80	3,170.5	-236.4	-311.5	-236.4	0.00	0.00	
3,300.0	9.22	232.80	3,269.2	-246.1	-324.2	-246.1	0.00	0.00	
3,400.0	9.22	232.80	3,367.9	-255.8	-337.0	-255.8	0.00	0.00	
3,500.0	9.22	232.80	3,466.6	-265.4	-349.7	-265.4	0.00	0.00	
3,600.0	9.22	232.80	3,565.3	-275.1	-362.5	-275.1	0.00	0.00	
3,700.0	9.22	232.80	3,664.0	-284.8	-375.3	-284.8	0.00	0.00	
3,800.0	9.22	232.80	3,762.7	-294.5	-388.0	-294.5	0.00	0.00	
3,900.0	9.22	232.80	3,861.4	-304.2	-400.8	-304.2	0.00	0.00	
4,000.0	9.22	232.80	3,960.1	-313.9	-413.6	-313.9	0.00	0.00	
4,100.0	9.22	232.80	4,058.8	-323.6	-426.3	-323.6	0.00	0.00	
4,200.0	9.22	232.80	4,157.5	-333.3	-439.1	-333.3	0.00	0.00	
4,300.0	9.22	232.80	4,256.2	-342.9	-451.9	-342.9	0.00	0.00	
4,400.0	9.22	232.80	4,355.0	-352.6	-464.6	-352.6	0.00	0.00	
4,500.0	9.22	232.80	4,453.7	-362.3	-477.4	-362.3	0.00	0.00	
4,600.0	9.22	232.80	4,552.4	-372.0	-490.2	-372.0	0.00	0.00	
4,700.0	9.22	232.80	4,651.1	-381.7	-502.9	-381.7	0.00	0.00	
4,755.6	9.22	232.80	4,706.0	-387.1	-510.0	-387.1	0.00	0.00	Sussex
4,800.0	9.22	232.80	4,749.8	-391.4	-515.7	-391.4	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,900.0	9.22	232.80	4,848.5	-401.1	-528.5	-401.1	0.00	0.00	
5,000.0	9.22	232.80	4,947.2	-410.8	-541.2	-410.8	0.00	0.00	
5,081.9	9.22	232.80	5,028.0	-418.7	-551.7	-418.7	0.00	0.00	Sussex Marker
5,100.0	9.22	232.80	5,045.9	-420.4	-554.0	-420.4	0.00	0.00	
5,200.0	9.22	232.80	5,144.6	-430.1	-566.7	-430.1	0.00	0.00	
5,300.0	9.22	232.80	5,243.3	-439.8	-579.5	-439.8	0.00	0.00	
5,400.0	9.22	232.80	5,342.0	-449.5	-592.3	-449.5	0.00	0.00	
5,449.6	9.22	232.80	5,391.0	-454.3	-598.6	-454.3	0.00	0.00	Shannon
5,500.0	9.22	232.80	5,440.7	-459.2	-605.0	-459.2	0.00	0.00	
5,600.0	9.22	232.80	5,539.4	-468.9	-617.8	-468.9	0.00	0.00	
5,700.0	9.22	232.80	5,638.2	-478.6	-630.6	-478.6	0.00	0.00	
5,800.0	9.22	232.80	5,736.9	-488.3	-643.3	-488.3	0.00	0.00	
5,900.0	9.22	232.80	5,835.6	-497.9	-656.1	-497.9	0.00	0.00	
6,000.0	9.22	232.80	5,934.3	-507.6	-668.9	-507.6	0.00	0.00	
6,100.0	9.22	232.80	6,033.0	-517.3	-681.6	-517.3	0.00	0.00	
6,200.0	9.22	232.80	6,131.7	-527.0	-694.4	-527.0	0.00	0.00	
6,300.0	9.22	232.80	6,230.4	-536.7	-707.2	-536.7	0.00	0.00	
6,400.0	9.22	232.80	6,329.1	-546.4	-719.9	-546.4	0.00	0.00	
6,500.0	9.22	232.80	6,427.8	-556.1	-732.7	-556.1	0.00	0.00	
6,600.0	9.22	232.80	6,526.5	-565.8	-745.5	-565.8	0.00	0.00	
6,700.0	9.22	232.80	6,625.2	-575.4	-758.2	-575.4	0.00	0.00	
6,775.7	9.22	232.80	6,700.0	-582.8	-767.9	-582.8	0.00	0.00	Teepee Buttes (*if present)
6,800.0	9.22	232.80	6,723.9	-585.1	-771.0	-585.1	0.00	0.00	
6,900.0	9.22	232.80	6,822.6	-594.8	-783.7	-594.8	0.00	0.00	
7,000.0	9.22	232.80	6,921.4	-604.5	-796.5	-604.5	0.00	0.00	
7,100.0	9.22	232.80	7,020.1	-614.2	-809.3	-614.2	0.00	0.00	
7,200.0	9.22	232.80	7,118.8	-623.9	-822.0	-623.9	0.00	0.00	
7,300.0	9.22	232.80	7,217.5	-633.6	-834.8	-633.6	0.00	0.00	
7,400.0	9.22	232.80	7,316.2	-643.3	-847.6	-643.3	0.00	0.00	
7,476.8	9.22	232.80	7,392.0	-650.7	-857.4	-650.7	0.00	0.00	Start DLS 10.00 TFO 127.34
7,500.0	8.03	246.11	7,414.9	-652.5	-860.3	-652.5	10.00	-5.15	
7,596.0	9.64	311.38	7,510.0	-649.9	-872.5	-649.9	10.00	1.68	Sharon Springs
7,600.0	9.91	313.15	7,514.0	-649.4	-873.0	-649.4	10.00	6.61	
7,655.3	14.22	330.03	7,568.0	-640.3	-879.9	-640.3	10.00	7.80	Niobrara
7,700.0	18.19	337.48	7,611.0	-629.1	-885.3	-629.1	10.00	8.87	
7,800.0	27.61	346.28	7,703.0	-592.1	-896.8	-592.1	10.00	9.42	
7,882.2	35.58	350.16	7,773.0	-549.9	-905.4	-549.9	10.00	9.70	B Chalk
7,895.9	36.91	350.65	7,784.0	-541.9	-906.8	-541.9	10.00	9.76	B Marl
7,900.0	37.32	350.80	7,787.3	-539.5	-907.2	-539.5	10.00	9.77	
8,000.0	47.13	353.65	7,861.3	-473.0	-916.1	-473.0	10.00	9.82	
8,010.0	48.12	353.89	7,868.0	-465.6	-916.9	-465.6	10.00	9.85	C Chalk
8,039.3	51.01	354.53	7,887.0	-443.4	-919.2	-443.4	10.00	9.86	C Marl
8,100.0	57.00	355.71	7,922.7	-394.5	-923.3	-394.5	10.00	9.87	
8,200.0	66.89	357.36	7,969.6	-306.6	-928.6	-306.6	10.00	9.89	
8,239.9	70.84	357.94	7,984.0	-269.4	-930.1	-269.4	10.00	9.91	Ft. Hayes
8,300.0	76.80	358.77	8,000.7	-211.7	-931.7	-211.7	10.00	9.91	
8,325.4	79.32	359.11	8,006.0	-186.8	-932.2	-186.8	10.00	9.91	Codell
8,400.0	86.72	0.08	8,015.1	-112.9	-932.7	-112.9	10.00	9.92	
8,433.1	90.00	0.50	8,016.0	-79.8	-932.5	-79.8	10.00	9.92	Start 4480.0 hold at 8433.1 MD
8,500.0	90.00	0.50	8,016.0	-12.9	-932.0	-12.9	0.00	0.00	
8,600.0	90.00	0.50	8,016.0	87.1	-931.1	87.1	0.00	0.00	
8,700.0	90.00	0.50	8,016.0	187.1	-930.2	187.1	0.00	0.00	

Cathedral Energy Services

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Wellbore:	Hz		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,800.0	90.00	0.50	8,016.0	287.1	-929.3	287.1	0.00	0.00	
8,900.0	90.00	0.50	8,016.0	387.1	-928.5	387.1	0.00	0.00	
9,000.0	90.00	0.50	8,016.0	487.1	-927.6	487.1	0.00	0.00	
9,100.0	90.00	0.50	8,016.0	587.1	-926.7	587.1	0.00	0.00	
9,200.0	90.00	0.50	8,016.0	687.1	-925.9	687.1	0.00	0.00	
9,300.0	90.00	0.50	8,016.0	787.1	-925.0	787.1	0.00	0.00	
9,400.0	90.00	0.50	8,016.0	887.1	-924.1	887.1	0.00	0.00	
9,500.0	90.00	0.50	8,016.0	987.1	-923.2	987.1	0.00	0.00	
9,600.0	90.00	0.50	8,016.0	1,087.1	-922.4	1,087.1	0.00	0.00	
9,700.0	90.00	0.50	8,016.0	1,187.1	-921.5	1,187.1	0.00	0.00	
9,800.0	90.00	0.50	8,016.0	1,287.1	-920.6	1,287.1	0.00	0.00	
9,900.0	90.00	0.50	8,016.0	1,387.0	-919.7	1,387.0	0.00	0.00	
10,000.0	90.00	0.50	8,016.0	1,487.0	-918.9	1,487.0	0.00	0.00	
10,100.0	90.00	0.50	8,016.0	1,587.0	-918.0	1,587.0	0.00	0.00	
10,200.0	90.00	0.50	8,016.0	1,687.0	-917.1	1,687.0	0.00	0.00	
10,300.0	90.00	0.50	8,016.0	1,787.0	-916.3	1,787.0	0.00	0.00	
10,400.0	90.00	0.50	8,016.0	1,887.0	-915.4	1,887.0	0.00	0.00	
10,500.0	90.00	0.50	8,016.0	1,987.0	-914.5	1,987.0	0.00	0.00	
10,600.0	90.00	0.50	8,016.0	2,087.0	-913.6	2,087.0	0.00	0.00	
10,700.0	90.00	0.50	8,016.0	2,187.0	-912.8	2,187.0	0.00	0.00	
10,800.0	90.00	0.50	8,016.0	2,287.0	-911.9	2,287.0	0.00	0.00	
10,900.0	90.00	0.50	8,016.0	2,387.0	-911.0	2,387.0	0.00	0.00	
11,000.0	90.00	0.50	8,016.0	2,487.0	-910.1	2,487.0	0.00	0.00	
11,100.0	90.00	0.50	8,016.0	2,587.0	-909.3	2,587.0	0.00	0.00	
11,200.0	90.00	0.50	8,016.0	2,687.0	-908.4	2,687.0	0.00	0.00	
11,300.0	90.00	0.50	8,016.0	2,787.0	-907.5	2,787.0	0.00	0.00	
11,400.0	90.00	0.50	8,016.0	2,887.0	-906.7	2,887.0	0.00	0.00	
11,500.0	90.00	0.50	8,016.0	2,987.0	-905.8	2,987.0	0.00	0.00	
11,600.0	90.00	0.50	8,016.0	3,087.0	-904.9	3,087.0	0.00	0.00	
11,700.0	90.00	0.50	8,016.0	3,187.0	-904.0	3,187.0	0.00	0.00	
11,800.0	90.00	0.50	8,016.0	3,287.0	-903.2	3,287.0	0.00	0.00	
11,900.0	90.00	0.50	8,016.0	3,387.0	-902.3	3,387.0	0.00	0.00	
12,000.0	90.00	0.50	8,016.0	3,487.0	-901.4	3,487.0	0.00	0.00	
12,100.0	90.00	0.50	8,016.0	3,587.0	-900.6	3,587.0	0.00	0.00	
12,200.0	90.00	0.50	8,016.0	3,687.0	-899.7	3,687.0	0.00	0.00	
12,300.0	90.00	0.50	8,016.0	3,787.0	-898.8	3,787.0	0.00	0.00	
12,400.0	90.00	0.50	8,016.0	3,887.0	-897.9	3,887.0	0.00	0.00	
12,500.0	90.00	0.50	8,016.0	3,987.0	-897.1	3,987.0	0.00	0.00	
12,600.0	90.00	0.50	8,016.0	4,086.9	-896.2	4,086.9	0.00	0.00	
12,700.0	90.00	0.50	8,016.0	4,186.9	-895.3	4,186.9	0.00	0.00	
12,800.0	90.00	0.50	8,016.0	4,286.9	-894.4	4,286.9	0.00	0.00	
12,900.0	90.00	0.50	8,016.0	4,386.9	-893.6	4,386.9	0.00	0.00	
12,913.1	90.00	0.50	8,016.0	4,400.0	-893.5	4,400.0	0.00	0.00	Start Turn 1.00
12,973.1	90.00	1.10	8,016.0	4,460.0	-892.6	4,460.0	1.00	0.00	Start 2600.0 hold at 12973.1 MD
13,000.0	90.00	1.10	8,016.0	4,486.9	-892.1	4,486.9	0.00	0.00	
13,100.0	90.00	1.10	8,016.0	4,586.9	-890.2	4,586.9	0.00	0.00	
13,200.0	90.00	1.10	8,016.0	4,686.9	-888.3	4,686.9	0.00	0.00	
13,300.0	90.00	1.10	8,016.0	4,786.9	-886.3	4,786.9	0.00	0.00	
13,400.0	90.00	1.10	8,016.0	4,886.9	-884.4	4,886.9	0.00	0.00	
13,500.0	90.00	1.10	8,016.0	4,986.8	-882.5	4,986.8	0.00	0.00	
13,600.0	90.00	1.10	8,016.0	5,086.8	-880.6	5,086.8	0.00	0.00	
13,700.0	90.00	1.10	8,016.0	5,186.8	-878.7	5,186.8	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
13,800.0	90.00	1.10	8,016.0	5,286.8	-876.7	5,286.8	0.00	0.00	
13,900.0	90.00	1.10	8,016.0	5,386.8	-874.8	5,386.8	0.00	0.00	
14,000.0	90.00	1.10	8,016.0	5,486.7	-872.9	5,486.7	0.00	0.00	
14,100.0	90.00	1.10	8,016.0	5,586.7	-871.0	5,586.7	0.00	0.00	
14,200.0	90.00	1.10	8,016.0	5,686.7	-869.1	5,686.7	0.00	0.00	
14,300.0	90.00	1.10	8,016.0	5,786.7	-867.1	5,786.7	0.00	0.00	
14,400.0	90.00	1.10	8,016.0	5,886.7	-865.2	5,886.7	0.00	0.00	
14,500.0	90.00	1.10	8,016.0	5,986.6	-863.3	5,986.6	0.00	0.00	
14,600.0	90.00	1.10	8,016.0	6,086.6	-861.4	6,086.6	0.00	0.00	
14,700.0	90.00	1.10	8,016.0	6,186.6	-859.5	6,186.6	0.00	0.00	
14,800.0	90.00	1.10	8,016.0	6,286.6	-857.5	6,286.6	0.00	0.00	
14,900.0	90.00	1.10	8,016.0	6,386.6	-855.6	6,386.6	0.00	0.00	
15,000.0	90.00	1.10	8,016.0	6,486.6	-853.7	6,486.6	0.00	0.00	
15,100.0	90.00	1.10	8,016.0	6,586.5	-851.8	6,586.5	0.00	0.00	
15,200.0	90.00	1.10	8,016.0	6,686.5	-849.9	6,686.5	0.00	0.00	
15,300.0	90.00	1.10	8,016.0	6,786.5	-847.9	6,786.5	0.00	0.00	
15,400.0	90.00	1.10	8,016.0	6,886.5	-846.0	6,886.5	0.00	0.00	
15,500.0	90.00	1.10	8,016.0	6,986.5	-844.1	6,986.5	0.00	0.00	
15,573.1	90.00	1.10	8,016.0	7,059.5	-842.7	7,059.5	0.00	0.00	Start DLS 1.00 TFO -90.00
15,600.0	90.00	0.83	8,016.0	7,086.4	-842.2	7,086.4	1.00	0.00	
15,700.0	90.00	359.83	8,016.0	7,186.4	-841.7	7,186.4	1.00	0.00	
15,800.0	90.00	358.83	8,016.0	7,286.4	-842.8	7,286.4	1.00	0.00	
15,900.0	90.00	357.83	8,016.0	7,386.4	-845.8	7,386.4	1.00	0.00	
16,000.0	90.00	356.83	8,016.0	7,486.3	-850.4	7,486.3	1.00	0.00	
16,100.0	90.00	355.83	8,016.0	7,586.1	-856.8	7,586.1	1.00	0.00	
16,188.1	90.00	354.95	8,016.0	7,673.9	-863.9	7,673.9	1.00	0.00	Start 904.7 hold at 16188.1 MD
16,200.0	90.00	354.95	8,016.0	7,685.7	-864.9	7,685.7	0.00	0.00	
16,300.0	90.00	354.95	8,016.0	7,785.4	-873.7	7,785.4	0.00	0.00	
16,400.0	90.00	354.95	8,016.0	7,885.0	-882.5	7,885.0	0.00	0.00	
16,500.0	90.00	354.95	8,016.0	7,984.6	-891.3	7,984.6	0.00	0.00	
16,600.0	90.00	354.95	8,016.0	8,084.2	-900.2	8,084.2	0.00	0.00	
16,700.0	90.00	354.95	8,016.0	8,183.8	-909.0	8,183.8	0.00	0.00	
16,800.0	90.00	354.95	8,016.0	8,283.4	-917.8	8,283.4	0.00	0.00	
16,900.0	90.00	354.95	8,016.0	8,383.0	-926.6	8,383.0	0.00	0.00	
17,000.0	90.00	354.95	8,016.0	8,482.6	-935.4	8,482.6	0.00	0.00	
17,092.8	90.00	354.95	8,016.0	8,575.1	-943.5	8,575.1	0.00	0.00	TD at 17092.8

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	North Reference:	True
Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Waste Connections 3B 1 - plan hits target center - Point	0.00	0.00	8,016.0	4,400.0	-893.5	1,254,475.34	3,130,189.74	40.030979	-105.035101
Waste Connections 3B-2 - plan misses target center by 97.6ft at 15545.9ft MD (8016.0 TVD, 7032.3 N, -843.2 E) - Point	0.00	0.00	8,016.0	7,034.2	-940.8	1,257,109.25	3,130,128.50	40.038210	-105.035270
Waste Connections 3B-2 - plan hits target center - Point	0.00	0.00	8,016.0	8,575.1	-943.5	1,258,650.10	3,130,117.62	40.042440	-105.035280

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
703.3	703.0	Fox Hills - BASE				
4,755.6	4,706.0	Sussex				
5,081.9	5,028.0	Sussex Marker				
5,449.6	5,391.0	Shannon				
6,775.7	6,700.0	Teepee Buttes (*if present)				
7,596.0	7,510.0	Sharon Springs				
7,655.3	7,568.0	Niobrara				
7,882.2	7,773.0	B Chalk				
7,895.9	7,784.0	B Marl				
8,010.0	7,868.0	C Chalk				
8,039.3	7,887.0	C Marl				
8,239.9	7,984.0	Ft. Hayes				
8,325.4	8,006.0	Codell				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
300.0	300.0	0.0	0.0	Start Build 1.00	
1,222.1	1,218.1	-44.8	-59.0	Start 6254.7 hold at 1222.1 MD	
7,476.8	7,392.0	-650.7	-857.4	Start DLS 10.00 TFO 127.34	
8,433.1	8,016.0	-79.8	-932.5	Start 4480.0 hold at 8433.1 MD	
12,913.1	8,016.0	4,400.0	-893.5	Start Turn 1.00	
12,973.1	8,016.0	4,460.0	-892.6	Start 2600.0 hold at 12973.1 MD	
15,573.1	8,016.0	7,059.5	-842.7	Start DLS 1.00 TFO -90.00	
16,188.1	8,016.0	7,673.9	-863.9	Start 904.7 hold at 16188.1 MD	
17,092.8	8,016.0	8,575.1	-943.5	TD at 17092.8	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S29-T1N-R68W (Pratt/Waste Connections)

Waste Connections 3B-29H-M168

Hz

Plan #2

Anticollision Report

03 December, 2014

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	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	12/2/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	17,092.3	Plan #2 (Hz)	MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S18-T1N-R68W (Erie Woolley)						
Erie-Vessels 4E-18H-I168 - Hz - Plan #2						Out of range
Erie-Vessels 4F-18H-I168 - Hz - Plan #3						Out of range
Erie-Vessels 4G-18H-I168 - Hz - Plan #2	7,800.0	19,467.4	966.5	739.1	4.249	SF
Erie-Vessels 4G-18H-I168 - Hz - Plan #2	7,891.9	19,419.7	963.3	737.5	4.266	CC, ES
Erie-Vessels 4H-18H-I168 - Hz - Plan #3	8,100.0	19,351.4	562.6	339.0	2.516	SF
Erie-Vessels 4H-18H-I168 - Hz - Plan #3	17,092.8	10,381.9	525.8	323.7	2.602	CC, ES
VESSELS MINERALS 19-16 - ENCANA - SURVEYS						Out of range
VESSELS MINERALS 43-19 - ENCANA - SURVEYS						Out of range
S29-T1N-R68W (Pratt/Waste Connections)						
COSTIGAN 24-20 - ENCANA - SURVEYS						Out of range
COSTIGAN 33-20 - ENCANA - SURVEYS						Out of range
COSTIGAN 34-20 - ENCANA - SURVEYS						Out of range
COSTIGAN 43-20 - ENCANA - SURVEYS						Out of range
COSTIGAN 6-8-20 - ENCANA - SURVEYS						Out of range
COSTIGAN 8-6-20 - ENCANA - SURVEYS						Out of range
COSTIGAN 8-8-20 - ENCANA - SURVEYS						Out of range
COSTIGAN E UNIT 1 - ENCANA - NO SURVEYS	13,845.4	7,940.0	409.7	299.7	3.723	CC, ES, SF
EDWARD P COSTIGAN 1 - ENCANA - SURVEYS						Out of range
M E DRIER 1 - SYNERGY - GYRO						Out of range
PRATT 0-2-29 - ENCANA - SURVEYS	11,016.7	8,120.4	445.7	377.1	6.500	CC, ES
PRATT 0-2-29 - ENCANA - SURVEYS	11,100.0	8,122.3	453.4	383.4	6.481	SF
PRATT 1 - SYNERGY - GYRO	283.0	272.0	697.0	696.1	736.709	CC
PRATT 1 - SYNERGY - GYRO	300.0	288.9	697.0	696.0	693.414	ES
PRATT 1 - SYNERGY - GYRO	2,700.0	2,667.1	996.2	986.8	106.064	SF
PRATT 12-29 - ENCANA - SURVEYS	10,333.4	8,254.7	186.5	119.2	2.770	CC, ES, SF
PRATT 2 - SYNERGY - GYRO	3,752.5	3,706.6	145.8	128.6	8.477	CC, ES
PRATT 2 - SYNERGY - GYRO	3,900.0	3,851.5	148.2	130.5	8.370	SF
PRATT 2-0-29 - ENCANA - SURVEYS	12,204.4	8,069.3	773.4	690.2	9.292	CC, ES
PRATT 2-0-29 - ENCANA - SURVEYS	12,300.0	8,070.4	779.3	694.4	9.181	SF
PRATT 21-29 - ENCANA WELL - SURVEYS						Out of range
PRATT 22-29 - ENCANA WELL - SURVEYS						Out of range
PRATT 2-4-29 - ENCANA - SURVEYS	9,744.6	8,488.4	821.6	753.6	12.079	CC, ES
PRATT 2-4-29 - ENCANA - SURVEYS	9,900.0	8,487.4	836.2	765.9	11.885	SF
PRATT 29-3 - SYNERGY - NO SURVEYS						Out of range
PRATT 4-2-29 - ENCANA - SURVEYS						Out of range
Pratt 4B-29H-P168 - Hz - Plan #1						Out of range
Pratt 4C-29H-P168 - Hz - Plan #4						Out of range
Pratt 4D-29H-P168 - Hz - Plan #2						Out of range
Pratt 4E-29H-P168 - Hz - Plan #4 Ext						Out of range
Pratt 4F-29H-P168 - Hz - Plan #2						Out of range
Pratt 4G-29H-P168 - Hz - Plan #4						Out of range
Pratt 4G-29H-P168 - Hz - SURVEYS						Out of range
PRATT F UNIT 1 - ENCANA WELL - NO SURVEYS	11,825.6	7,967.0	97.6	22.1	1.293	Level 3, CC, ES, SF
SRC PRATT 13-29D - SYNERGY - SURVEYS	8,994.6	8,134.4	203.3	164.4	5.223	CC, ES
SRC PRATT 13-29D - SYNERGY - SURVEYS	9,000.0	8,134.5	203.4	164.4	5.218	SF
SRC PRATT 14-29D - SYNERGY - SURVEYS	7,549.1	7,559.3	270.7	234.1	7.392	CC, ES, SF
SRC PRATT 24-29 PD - SYNERGY - SURVEYS	1,363.7	1,330.7	432.0	425.7	68.438	CC, ES
SRC PRATT 24-29 PD - SYNERGY - SURVEYS	2,300.0	2,202.8	543.3	532.2	48.908	SF
SRC PRATT 29HD (AL) - SYNERGY - NEVER DRILLED	3,954.8	3,903.5	124.1	105.9	6.801	CC
SRC PRATT 29HD (AL) - SYNERGY - NEVER DRILLED	4,000.0	3,948.1	124.4	105.9	6.734	ES
SRC PRATT 29HD (AL) - SYNERGY - NEVER DRILLED	4,100.0	4,046.8	126.3	107.5	6.699	SF
SRC PRATT 29LD (AL) - SYNERGY - NEVER DRILLED	3,655.5	3,608.1	160.5	143.8	9.586	CC

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S29-T1N-R68W (Pratt/Waste Connections)						
SRC PRATT 29LD (AL) - SYNERGY - NEVER DRILLED	3,700.0	3,652.0	160.7	143.7	9.472	ES
SRC PRATT 29LD (AL) - SYNERGY - NEVER DRILLED	3,900.0	3,849.4	165.3	147.5	9.297	SF
SRC PRATT 29PD - SYNERGY - SURVEYS						Out of range
SRC PRATT 29QD (AL) - SYNERGY - NEVER DRILLED	3,515.7	3,472.5	194.1	178.1	12.095	CC, ES
SRC PRATT 29QD (AL) - SYNERGY - NEVER DRILLED	3,800.0	3,753.0	199.5	182.3	11.562	SF
SRC PRATT 29SD - SYNERGY - SURVEYS						Out of range
SRC PRATT 29TD - SYNERGY - SURVEYS						Out of range
SRC PRATT 29XD - SYNERGY - GYRO						Out of range
SRC PRATT 31-29D - SYNERGY - SURVEYS						Out of range
SRC PRATT 32-29D - SYNERGY - SURVEYS						Out of range
SRC PRATT 33-29PD - SYNERGY - SURVEYS						Out of range
SRC PRATT 34-29D - SYNERGY - SURVEYS						Out of range
SRC PRATT 41-29D - SYNERGY - SURVEYS						Out of range
SRC PRATT 42-29D - SYNERGY - SURVEYS						Out of range
SRC PRATT 43-29D - SYNERGY - SURVEYS						Out of range
SRC PRATT 44-29D (AL) - SYNERGY - NEVER DRILLE						Out of range
Waste Connections 3A-29H-M168 - Hz - Plan #1	200.0	200.0	8.4	7.7	12.872	CC, ES
Waste Connections 3A-29H-M168 - Hz - Plan #1	15,738.4	14,919.4	473.7	245.3	2.074	SF
Waste Connections 3C-29H-M168 - Hz - Plan #1	300.0	300.0	11.2	10.2	11.183	CC, ES
Waste Connections 3C-29H-M168 - Hz - Plan #1	15,900.0	16,580.8	367.7	157.1	1.746	SF
Waste Connections 3D-29H-M168 - Hz - Plan #2	300.0	319.0	19.6	18.6	19.570	CC, ES
Waste Connections 3D-29H-M168 - Hz - Plan #2	16,100.0	15,361.1	648.1	376.2	2.383	SF
Waste Connections 3E-29H-M168 - Hz - Plan #1	300.0	300.0	30.8	29.8	30.752	CC, ES
Waste Connections 3E-29H-M168 - Hz - Plan #1	800.0	799.4	49.1	46.3	17.518	SF
Waste Connections 3F-29H-M168 - Hz - Plan #2	300.0	300.0	39.2	38.2	39.140	CC, ES
Waste Connections 3F-29H-M168 - Hz - Plan #2	700.0	698.5	54.8	52.4	22.447	SF
Waste Connections 3G-29H-M168 - Hz - Plan #1	166.3	167.3	50.4	49.9	93.886	CC
Waste Connections 3G-29H-M168 - Hz - Plan #1	200.0	201.0	50.4	49.8	77.027	ES
Waste Connections 3G-29H-M168 - Hz - Plan #1	700.0	696.4	76.4	73.9	31.241	SF
WILLIAM H PELTIER 1 (P/A) - VESSELS - NO SURVEY						Out of range
WILLIAM H PELTIER 2 - ENCANA - SURVEYS						Out of range
WILLIAM PELTIER 12-20 - ENCANA - SURVEYS	15,748.1	8,042.4	137.0	0.2	1.002	Level 2, CC, ES, SF
WILLIAM PELTIER 1A-20H - ENCANA - SURVEYS	15,821.3	12,245.3	350.5	305.6	7.806	CC, ES
WILLIAM PELTIER 1A-20H - ENCANA - SURVEYS	15,900.0	12,228.4	358.8	312.6	7.771	SF
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)						
Morgan Hills 1F-7H-A168 - HZ - Plan #2						Out of range
Morgan Hills 1G-7H-A168 - HZ - Plan #2						Out of range
Morgan Hills 1H-7H-A168 - HZ - Plan #2						Out of range
Morgan Hills 1I-7H-A168 - HZ - Plan #2						Out of range

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S18-T1N-R68W (Erie Woolley) - Erie-Vessels 4G-18H-I168 - Hz - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-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		
7,700.0	7,611.0	19,504.4	7,606.0	23.4	212.7	-69.41	-629.0	-1,862.5	978.7	750.4	228.24	4.288	4.266 CC, ES	
7,800.0	7,703.0	19,467.4	7,606.0	23.3	212.1	-76.74	-591.9	-1,862.5	966.5	739.1	227.44	4.249 SF		
7,891.9	7,780.8	19,419.7	7,606.0	23.1	211.2	-78.24	-544.2	-1,862.5	963.3	737.5	225.79	4.270		
7,900.0	7,787.3	19,414.9	7,606.0	23.1	211.1	-78.24	-539.4	-1,862.5	963.3	737.7	225.59	4.350		
8,000.0	7,861.3	19,348.3	7,606.0	22.8	210.0	-77.08	-472.9	-1,862.5	966.8	744.5	222.25	4.479		
8,100.0	7,922.7	19,269.9	7,606.0	22.6	208.6	-74.76	-394.4	-1,862.5	974.2	756.7	217.50	4.631		
8,200.0	7,969.6	19,181.9	7,606.0	22.3	207.1	-72.28	-306.5	-1,862.5	982.7	770.5	212.18	4.770	4.857	
8,300.0	8,000.7	19,087.1	7,606.0	22.2	205.4	-70.34	-211.6	-1,862.5	989.8	782.3	207.52	4.897		
8,400.0	8,015.1	18,988.2	7,606.0	22.1	203.7	-69.35	-112.8	-1,862.5	993.8	789.2	204.63	4.934		
8,500.0	8,016.0	18,888.3	7,606.0	22.1	202.0	-69.28	-12.8	-1,862.5	994.9	791.7	203.16	4.967		
8,600.0	8,016.0	18,788.3	7,606.0	22.3	200.2	-69.30	87.2	-1,862.5	995.7	793.9	201.81	4.996		
8,700.0	8,016.0	18,688.3	7,606.0	22.6	198.5	-69.31	187.2	-1,862.5	996.5	795.8	200.63	5.022		
8,800.0	8,016.0	18,588.3	7,606.0	23.1	196.7	-69.33	287.2	-1,862.4	997.3	797.7	199.62	5.045	5.066	
8,900.0	8,016.0	18,488.3	7,606.0	23.6	195.0	-69.35	387.2	-1,862.4	998.1	799.3	198.74	5.149		
9,000.0	8,016.0	18,388.3	7,606.0	24.3	193.2	-69.37	487.2	-1,862.4	998.9	800.9	197.99	5.111		
9,100.0	8,016.0	18,288.3	7,606.0	25.1	191.5	-69.38	587.2	-1,862.4	999.7	802.4	197.34	5.076		
16,900.0	8,016.0	10,492.3	7,606.0	150.5	57.3	-69.30	8,383.1	-1,861.6	999.1	805.0	194.02	5.149		
17,000.0	8,016.0	10,392.7	7,606.0	152.3	55.6	-69.12	8,482.7	-1,861.5	990.8	797.0	193.85	5.111		
17,092.8	8,016.0	10,300.3	7,606.0	153.9	54.1	-68.95	8,575.2	-1,861.5	983.2	789.5	193.69	5.076		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S18-T1N-R68W (Erie Woolley) - Erie-Vessels 4H-18H-I168 - Hz - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink 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)	
7,300.0	7,217.5	19,590.1	7,835.0	22.5	213.5	44.49	-631.4	-1,485.9	937.5	712.9	224.59	4.174		
7,400.0	7,316.2	19,599.8	7,835.0	22.8	213.7	43.51	-641.1	-1,485.9	859.7	634.1	225.61	3.810		
7,500.0	7,414.9	19,609.1	7,835.0	23.2	213.8	27.10	-650.4	-1,485.9	786.7	559.3	227.48	3.458		
7,600.0	7,514.0	19,606.1	7,835.0	23.3	213.8	-47.94	-647.3	-1,485.9	720.1	491.2	228.93	3.145		
7,700.0	7,611.0	19,585.8	7,835.0	23.4	213.4	-76.54	-627.0	-1,485.8	663.0	434.9	228.12	2.907		
7,800.0	7,703.0	19,548.8	7,835.0	23.3	212.8	-86.21	-590.1	-1,485.7	618.5	391.1	227.43	2.719		
7,900.0	7,787.3	19,496.3	7,835.0	23.1	211.9	-88.83	-537.5	-1,485.5	587.8	360.7	227.03	2.589		
8,000.0	7,861.3	19,429.8	7,835.0	22.8	210.7	-87.81	-471.0	-1,485.3	570.0	344.0	226.04	2.522		
8,100.0	7,922.7	19,351.4	7,835.0	22.6	209.4	-84.94	-392.6	-1,485.0	562.6	339.0	223.60	2.516 SF		
8,170.9	7,957.5	19,289.8	7,835.0	22.4	208.3	-82.54	-331.1	-1,484.8	561.4	340.4	221.02	2.540		
8,200.0	7,969.6	19,263.4	7,835.0	22.3	207.8	-81.58	-304.7	-1,484.7	561.6	341.7	219.83	2.555		
8,300.0	8,000.7	19,168.6	7,835.0	22.2	206.2	-78.84	-209.8	-1,484.4	563.3	347.5	215.84	2.610		
8,400.0	8,015.1	19,069.7	7,835.0	22.1	204.5	-77.43	-111.0	-1,484.1	564.9	351.9	213.00	2.652		
8,500.0	8,016.0	18,969.8	7,835.0	22.1	202.7	-77.33	-11.0	-1,483.8	565.5	354.2	211.39	2.675		
8,600.0	8,016.0	18,869.8	7,835.0	22.3	201.0	-77.35	89.0	-1,483.4	566.1	356.1	209.96	2.696		
8,700.0	8,016.0	18,769.8	7,835.0	22.6	199.2	-77.36	189.0	-1,483.1	566.6	357.9	208.72	2.715		
8,800.0	8,016.0	18,669.8	7,835.0	23.1	197.5	-77.37	289.0	-1,482.7	567.1	359.5	207.65	2.731		
8,900.0	8,016.0	18,569.8	7,835.0	23.6	195.8	-77.38	389.0	-1,482.4	567.6	360.9	206.73	2.746		
9,000.0	8,016.0	18,469.8	7,835.0	24.3	194.0	-77.39	489.0	-1,482.1	568.1	362.2	205.93	2.759		
9,100.0	8,016.0	18,369.8	7,835.0	25.1	192.3	-77.41	589.0	-1,481.7	568.7	363.4	205.25	2.771		
9,200.0	8,016.0	18,269.8	7,835.0	26.0	190.5	-77.42	689.0	-1,481.4	569.2	364.5	204.67	2.781		
9,300.0	8,016.0	18,169.8	7,835.0	26.9	188.8	-77.43	789.0	-1,481.0	569.7	365.5	204.17	2.790		
9,400.0	8,016.0	18,069.8	7,835.0	28.0	187.1	-77.44	889.0	-1,480.7	570.2	366.5	203.73	2.799		
9,500.0	8,016.0	17,969.8	7,835.0	29.1	185.3	-77.45	989.0	-1,480.4	570.7	367.4	203.35	2.807		
9,600.0	8,016.0	17,869.8	7,835.0	30.3	183.6	-77.46	1,089.0	-1,480.0	571.3	368.3	203.01	2.814		
9,700.0	8,016.0	17,769.8	7,835.0	31.5	181.9	-77.47	1,189.0	-1,479.7	571.8	369.1	202.72	2.821		
9,800.0	8,016.0	17,669.8	7,835.0	32.8	180.1	-77.49	1,289.0	-1,479.3	572.3	369.8	202.46	2.827		
9,900.0	8,016.0	17,569.8	7,835.0	34.1	178.4	-77.50	1,389.0	-1,479.0	572.8	370.6	202.23	2.832		
10,000.0	8,016.0	17,469.8	7,835.0	35.5	176.7	-77.51	1,488.9	-1,478.6	573.3	371.3	202.03	2.838		
10,100.0	8,016.0	17,369.8	7,835.0	36.8	174.9	-77.52	1,588.9	-1,478.3	573.9	372.0	201.85	2.843		
10,200.0	8,016.0	17,269.8	7,835.0	38.3	173.2	-77.53	1,688.9	-1,478.0	574.4	372.7	201.68	2.848		
10,300.0	8,016.0	17,169.8	7,835.0	39.7	171.5	-77.54	1,788.9	-1,477.6	574.9	373.4	201.54	2.853		
10,400.0	8,016.0	17,069.8	7,835.0	41.2	169.7	-77.56	1,888.9	-1,477.3	575.4	374.0	201.40	2.857		
10,500.0	8,016.0	16,969.8	7,835.0	42.7	168.0	-77.57	1,988.9	-1,476.9	575.9	374.7	201.28	2.861		
10,600.0	8,016.0	16,869.8	7,835.0	44.2	166.3	-77.58	2,088.9	-1,476.6	576.5	375.3	201.17	2.866		
10,700.0	8,016.0	16,769.8	7,835.0	45.7	164.5	-77.59	2,188.9	-1,476.3	577.0	375.9	201.07	2.870		
10,800.0	8,016.0	16,669.8	7,835.0	47.3	162.8	-77.60	2,288.9	-1,475.9	577.5	376.5	200.98	2.873		
10,900.0	8,016.0	16,569.8	7,835.0	48.8	161.1	-77.61	2,388.9	-1,475.6	578.0	377.1	200.90	2.877		
11,000.0	8,016.0	16,469.8	7,835.0	50.4	159.3	-77.62	2,488.9	-1,475.2	578.5	377.7	200.82	2.881		
11,100.0	8,016.0	16,369.8	7,835.0	52.0	157.6	-77.63	2,588.9	-1,474.9	579.1	378.3	200.75	2.885		
11,200.0	8,016.0	16,269.8	7,835.0	53.6	155.9	-77.65	2,688.9	-1,474.6	579.6	378.9	200.69	2.888		
11,300.0	8,016.0	16,169.8	7,835.0	55.2	154.1	-77.66	2,788.9	-1,474.2	580.1	379.5	200.63	2.891		
11,400.0	8,016.0	16,069.8	7,835.0	56.8	152.4	-77.67	2,888.9	-1,473.9	580.6	380.1	200.57	2.895		
11,500.0	8,016.0	15,969.8	7,835.0	58.4	150.7	-77.68	2,988.9	-1,473.5	581.1	380.6	200.52	2.898		
11,600.0	8,016.0	15,869.8	7,835.0	60.0	149.0	-77.69	3,088.9	-1,473.2	581.7	381.2	200.48	2.901		
11,700.0	8,016.0	15,769.8	7,835.0	61.7	147.2	-77.70	3,188.9	-1,472.9	582.2	381.8	200.44	2.905		
11,800.0	8,016.0	15,669.8	7,835.0	63.3	145.5	-77.71	3,288.9	-1,472.5	582.7	382.3	200.40	2.908		
11,900.0	8,016.0	15,569.8	7,835.0	65.0	143.8	-77.72	3,388.9	-1,472.2	583.2	382.9	200.36	2.911		
12,000.0	8,016.0	15,469.8	7,835.0	66.6	142.1	-77.74	3,488.9	-1,471.8	583.8	383.4	200.33	2.914		
12,100.0	8,016.0	15,369.8	7,835.0	68.3	140.3	-77.75	3,588.9	-1,471.5	584.3	384.0	200.30	2.917		
12,200.0	8,016.0	15,269.8	7,835.0	69.9	138.6	-77.76	3,688.9	-1,471.2	584.8	384.5	200.27	2.920		
12,300.0	8,016.0	15,169.8	7,835.0	71.6	136.9	-77.77	3,788.9	-1,470.8	585.3	385.1	200.25	2.923		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S18-T1N-R68W (Erie Woolley) - Erie-Vessels 4H-18H-I168 - Hz - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink 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)				
12,400.0	8,016.0	15,069.8	7,835.0	73.3	135.2	-77.78	3,888.9	-1,470.5	585.8	385.6	200.23	2.926		
12,500.0	8,016.0	14,969.8	7,835.0	75.0	133.4	-77.79	3,988.9	-1,470.1	586.4	386.1	200.20	2.929		
12,600.0	8,016.0	14,869.8	7,835.0	76.6	131.7	-77.80	4,088.9	-1,469.8	586.9	386.7	200.19	2.932		
12,700.0	8,016.0	14,769.8	7,835.0	78.3	130.0	-77.81	4,188.9	-1,469.5	587.4	387.2	200.17	2.934		
12,800.0	8,016.0	14,669.8	7,835.0	80.0	128.3	-77.82	4,288.9	-1,469.1	587.9	387.8	200.15	2.937		
12,900.0	8,016.0	14,569.8	7,835.0	81.7	126.6	-77.83	4,388.9	-1,468.8	588.4	388.3	200.14	2.940		
13,000.0	8,016.0	14,469.8	7,835.0	83.4	124.9	-77.86	4,488.9	-1,468.4	589.5	389.8	199.74	2.952		
13,100.0	8,016.0	14,369.8	7,835.0	85.1	123.1	-77.89	4,588.9	-1,468.1	591.1	391.3	199.74	2.959		
13,200.0	8,016.0	14,269.9	7,835.0	86.8	121.4	-77.92	4,688.9	-1,467.8	592.6	392.9	199.75	2.967		
13,300.0	8,016.0	14,169.9	7,835.0	88.4	119.7	-77.95	4,788.8	-1,467.4	594.2	394.4	199.75	2.975		
13,400.0	8,016.0	14,069.9	7,835.0	90.1	118.0	-77.98	4,888.8	-1,467.1	595.7	396.0	199.76	2.982		
13,500.0	8,016.0	13,969.9	7,835.0	91.8	116.3	-78.02	4,988.8	-1,466.7	597.3	397.5	199.77	2.990		
13,600.0	8,016.0	13,869.9	7,835.0	93.5	114.6	-78.05	5,088.8	-1,466.4	598.8	399.0	199.78	2.997		
13,700.0	8,016.0	13,769.9	7,835.0	95.2	112.9	-78.08	5,188.8	-1,466.1	600.4	400.6	199.80	3.005		
13,800.0	8,016.0	13,669.9	7,835.0	97.0	111.2	-78.11	5,288.8	-1,465.7	601.9	402.1	199.81	3.012		
13,900.0	8,016.0	13,569.9	7,835.0	98.7	109.5	-78.14	5,388.8	-1,465.4	603.4	403.6	199.83	3.020		
14,000.0	8,016.0	13,470.0	7,835.0	100.4	107.8	-78.17	5,488.8	-1,465.0	605.0	405.2	199.84	3.027		
14,100.0	8,016.0	13,370.0	7,835.0	102.1	106.1	-78.20	5,588.7	-1,464.7	606.5	406.7	199.86	3.035		
14,200.0	8,016.0	13,270.0	7,835.0	103.8	104.4	-78.23	5,688.7	-1,464.4	608.1	408.2	199.87	3.042		
14,300.0	8,016.0	13,170.0	7,835.0	105.5	102.7	-78.26	5,788.7	-1,464.0	609.6	409.7	199.89	3.050		
14,400.0	8,016.0	13,070.0	7,835.0	107.2	101.0	-78.29	5,888.7	-1,463.7	611.2	411.3	199.91	3.057		
14,500.0	8,016.0	12,970.0	7,835.0	108.9	99.3	-78.32	5,988.7	-1,463.3	612.7	412.8	199.93	3.065		
14,600.0	8,016.0	12,870.0	7,835.0	110.6	97.6	-78.35	6,088.7	-1,463.0	614.3	414.3	199.95	3.072		
14,700.0	8,016.0	12,770.0	7,835.0	112.4	95.9	-78.38	6,188.7	-1,462.7	615.8	415.8	199.98	3.079		
14,800.0	8,016.0	12,670.1	7,835.0	114.1	94.2	-78.41	6,288.6	-1,462.3	617.4	417.4	200.00	3.087		
14,900.0	8,016.0	12,570.1	7,835.0	115.8	92.5	-78.44	6,388.6	-1,462.0	618.9	418.9	200.03	3.094		
15,000.0	8,016.0	12,470.1	7,835.0	117.5	90.9	-78.47	6,488.6	-1,461.6	620.5	420.4	200.05	3.102		
15,100.0	8,016.0	12,370.1	7,835.0	119.2	89.2	-78.50	6,588.6	-1,461.3	622.0	421.9	200.08	3.109		
15,200.0	8,016.0	12,270.1	7,835.0	121.0	87.5	-78.53	6,688.6	-1,461.0	623.6	423.5	200.11	3.116		
15,300.0	8,016.0	12,170.1	7,835.0	122.7	85.8	-78.56	6,788.6	-1,460.6	625.1	425.0	200.14	3.123		
15,400.0	8,016.0	12,070.1	7,835.0	124.4	84.2	-78.59	6,888.6	-1,460.3	626.7	426.5	200.17	3.131		
15,500.0	8,016.0	11,970.1	7,835.0	126.1	82.5	-78.61	6,988.6	-1,459.9	628.2	428.0	200.20	3.138		
15,600.0	8,016.0	11,870.2	7,835.0	127.9	80.8	-78.64	7,088.5	-1,459.6	629.7	429.3	200.41	3.142		
15,700.0	8,016.0	11,770.2	7,835.0	129.6	79.2	-78.65	7,188.5	-1,459.3	629.9	428.9	201.06	3.133		
15,800.0	8,016.0	11,670.2	7,835.0	131.3	77.5	-78.62	7,288.5	-1,458.9	628.4	426.8	201.63	3.117		
15,900.0	8,016.0	11,570.2	7,835.0	133.1	75.9	-78.55	7,388.5	-1,458.6	625.3	423.1	202.12	3.093		
16,000.0	8,016.0	11,470.3	7,835.0	134.8	74.2	-78.45	7,488.3	-1,458.2	620.4	417.8	202.53	3.063		
16,100.0	8,016.0	11,370.6	7,835.0	136.6	72.6	-78.31	7,588.1	-1,457.9	613.8	410.9	202.86	3.025		
16,200.0	8,016.0	11,270.9	7,835.0	138.3	71.0	-78.13	7,687.8	-1,457.6	605.5	402.4	203.08	2.981		
16,300.0	8,016.0	11,171.4	7,835.0	140.0	69.4	-77.95	7,787.3	-1,457.2	596.5	393.5	202.99	2.939		
16,400.0	8,016.0	11,071.8	7,835.0	141.8	67.7	-77.77	7,886.9	-1,456.9	587.6	384.7	202.89	2.896		
16,500.0	8,016.0	10,972.2	7,835.0	143.5	66.1	-77.58	7,986.5	-1,456.6	578.6	375.9	202.79	2.853		
16,600.0	8,016.0	10,872.6	7,835.0	145.3	64.5	-77.38	8,086.1	-1,456.2	569.7	367.0	202.69	2.811		
16,700.0	8,016.0	10,773.0	7,835.0	147.0	62.9	-77.17	8,185.7	-1,455.9	560.8	358.2	202.58	2.768		
16,800.0	8,016.0	10,673.5	7,835.0	148.8	61.4	-76.96	8,285.2	-1,455.5	551.9	349.4	202.47	2.726		
16,900.0	8,016.0	10,573.9	7,835.0	150.5	59.8	-76.75	8,384.8	-1,455.2	543.0	340.6	202.35	2.683		
17,000.0	8,016.0	10,474.3	7,835.0	152.3	58.2	-76.52	8,484.4	-1,454.9	534.1	331.9	202.22	2.641		
17,092.8	8,016.0	10,381.9	7,835.0	153.9	56.8	-76.31	8,576.8	-1,454.5	525.8	323.7	202.10	2.602 CC, ES		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN E UNIT 1 - ENCANA - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8446-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		
13,000.0	8,016.0	7,940.0	7,940.0	83.4	13.9	90.00	5,324.3	-466.2	939.4	844.0	95.44	9.843		
13,100.0	8,016.0	7,940.0	7,940.0	85.1	13.9	90.00	5,324.3	-466.2	850.5	753.4	97.16	8.754		
13,200.0	8,016.0	7,940.0	7,940.0	86.8	13.9	90.00	5,324.3	-466.2	764.4	665.5	98.89	7.730		
13,300.0	8,016.0	7,940.0	7,940.0	88.4	13.9	90.00	5,324.3	-466.2	682.1	581.5	100.62	6.779		
13,400.0	8,016.0	7,940.0	7,940.0	90.1	13.9	90.00	5,324.3	-466.2	605.2	502.8	102.35	5.913		
13,500.0	8,016.0	7,940.0	7,940.0	91.8	13.9	90.00	5,324.3	-466.2	535.9	431.8	104.08	5.149		
13,600.0	8,016.0	7,940.0	7,940.0	93.5	13.9	90.00	5,324.3	-466.2	477.6	371.8	105.81	4.513		
13,700.0	8,016.0	7,940.0	7,940.0	95.2	13.9	90.00	5,324.3	-466.2	434.7	327.2	107.54	4.043		
13,800.0	8,016.0	7,940.0	7,940.0	97.0	13.9	90.00	5,324.3	-466.2	412.2	302.9	109.27	3.772		
13,845.4	8,016.0	7,940.0	7,940.0	97.7	13.9	90.00	5,324.3	-466.2	409.7	299.7	110.06	3.723 CC, ES, SF		
13,900.0	8,016.0	7,940.0	7,940.0	98.7	13.9	90.00	5,324.3	-466.2	413.3	302.3	111.01	3.724		
14,000.0	8,016.0	7,940.0	7,940.0	100.4	13.9	90.00	5,324.3	-466.2	437.9	325.2	112.74	3.884		
14,100.0	8,016.0	7,940.0	7,940.0	102.1	13.9	90.00	5,324.3	-466.2	482.4	367.9	114.48	4.214		
14,200.0	8,016.0	7,940.0	7,940.0	103.8	13.9	90.00	5,324.3	-466.2	541.9	425.7	116.21	4.663		
14,300.0	8,016.0	7,940.0	7,940.0	105.5	13.9	90.00	5,324.3	-466.2	612.0	494.1	117.95	5.189		
14,400.0	8,016.0	7,940.0	7,940.0	107.2	13.9	90.00	5,324.3	-466.2	689.6	569.9	119.69	5.761		
14,500.0	8,016.0	7,940.0	7,940.0	108.9	13.9	90.00	5,324.3	-466.2	772.3	650.9	121.42	6.360		
14,600.0	8,016.0	7,940.0	7,940.0	110.6	13.9	90.00	5,324.3	-466.2	858.7	735.5	123.16	6.972		
14,700.0	8,016.0	7,940.0	7,940.0	112.4	13.9	90.00	5,324.3	-466.2	947.8	822.9	124.90	7.588		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 0-2-29 - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 41-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	8,016.0	8,101.8	7,979.3	38.3	21.3	-88.36	2,507.2	-1,355.9	930.2	875.0	55.22	16.846		
10,300.0	8,016.0	8,104.1	7,981.6	39.7	21.3	-88.66	2,507.2	-1,355.8	843.8	787.0	56.82	14.852		
10,400.0	8,016.0	8,106.4	7,983.9	41.2	21.3	-88.96	2,507.3	-1,355.8	760.7	702.3	58.43	13.020		
10,500.0	8,016.0	8,108.7	7,986.2	42.7	21.3	-89.26	2,507.3	-1,355.8	682.2	622.2	60.05	11.361		
10,600.0	8,016.0	8,111.0	7,988.5	44.2	21.3	-89.55	2,507.4	-1,355.8	610.1	548.4	61.68	9.890		
10,700.0	8,016.0	8,113.3	7,990.8	45.7	21.3	-89.84	2,507.4	-1,355.7	546.7	483.4	63.33	8.633		
10,800.0	8,016.0	8,115.6	7,993.0	47.3	21.3	-90.13	2,507.5	-1,355.7	495.5	430.6	64.98	7.626		
10,900.0	8,016.0	8,117.8	7,995.3	48.8	21.3	-90.42	2,507.5	-1,355.7	460.7	394.1	66.63	6.914		
11,000.0	8,016.0	8,120.1	7,997.5	50.4	21.3	-90.71	2,507.6	-1,355.6	446.0	377.7	68.29	6.531		
11,016.7	8,016.0	8,120.4	7,997.9	50.7	21.3	-90.76	2,507.6	-1,355.6	445.7	377.1	68.57	6.500 CC, ES		
11,100.0	8,016.0	8,122.3	7,999.8	52.0	21.3	-91.00	2,507.6	-1,355.6	453.4	383.4	69.96	6.481 SF		
11,200.0	8,016.0	8,124.5	8,002.0	53.6	21.3	-91.29	2,507.7	-1,355.6	481.9	410.3	71.63	6.728		
11,300.0	8,016.0	8,126.8	8,004.2	55.2	21.3	-91.57	2,507.7	-1,355.5	528.1	454.8	73.30	7.204		
11,400.0	8,016.0	8,129.0	8,006.4	56.8	21.3	-91.86	2,507.8	-1,355.5	587.8	512.8	74.98	7.840		
11,500.0	8,016.0	8,131.2	8,008.6	58.4	21.3	-92.14	2,507.8	-1,355.5	657.3	580.7	76.65	8.576		
11,600.0	8,016.0	8,133.4	8,010.8	60.0	21.3	-92.42	2,507.9	-1,355.5	734.0	655.6	78.33	9.370		
11,700.0	8,016.0	8,135.6	8,013.0	61.7	21.3	-92.70	2,507.9	-1,355.4	815.7	735.7	80.01	10.194		
11,800.0	8,016.0	8,137.8	8,015.2	63.3	21.3	-92.98	2,508.0	-1,355.4	901.1	819.4	81.69	11.030		
11,900.0	8,016.0	8,139.9	8,017.4	65.0	21.3	-93.26	2,508.0	-1,355.4	989.2	905.8	83.38	11.864		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 1 - SYNERGY - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-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	42.18	516.6	468.0	697.1					
100.0	100.0	88.8	88.8	0.2	0.2	42.16	516.7	467.8	697.0	696.7	0.31	2,270.766		
200.0	200.0	189.3	189.3	0.3	0.3	42.13	516.9	467.6	697.0	696.4	0.66	1,061.321		
283.0	283.0	272.0	272.0	0.5	0.5	42.14	516.9	467.6	697.0	696.1	0.95	736.709 CC		
300.0	300.0	288.9	288.9	0.5	0.5	42.14	516.8	467.7	697.0	696.0	1.01	693.414 ES		
400.0	400.0	391.3	391.3	0.7	0.7	169.34	516.8	467.4	697.7	696.4	1.36	513.630		
500.0	500.0	487.5	487.5	0.9	0.9	169.35	516.9	467.2	700.2	698.5	1.70	411.775		
600.0	599.9	588.8	588.8	1.0	1.0	169.40	517.2	467.2	704.7	702.6	2.05	343.475		
700.0	699.7	687.6	687.6	1.2	1.2	169.45	517.4	467.0	710.7	708.3	2.40	296.395		
800.0	799.4	791.3	791.3	1.4	1.4	169.56	517.3	467.0	718.4	715.6	2.75	261.003		
900.0	898.9	886.5	886.5	1.7	1.5	169.71	516.9	467.2	727.6	724.5	3.09	235.343		
1,000.0	998.3	987.3	987.3	1.9	1.7	169.86	516.9	467.4	738.9	735.5	3.44	214.749		
1,100.0	1,097.4	1,086.4	1,086.4	2.2	1.9	169.96	517.3	467.0	751.8	748.0	3.79	198.510		
1,200.0	1,196.3	1,184.5	1,184.5	2.5	2.1	170.05	518.0	466.3	766.4	762.2	4.13	185.526		
1,300.0	1,295.0	1,288.2	1,288.1	2.8	2.2	170.21	518.4	465.6	782.0	777.5	4.49	174.204		
1,400.0	1,393.7	1,381.7	1,381.7	3.1	2.4	170.29	519.1	464.5	797.5	792.7	4.83	165.068		
1,500.0	1,492.4	1,488.3	1,488.2	3.4	2.6	170.40	520.0	463.3	813.1	807.9	5.20	156.491		
1,600.0	1,591.1	1,581.9	1,581.8	3.7	2.8	170.50	520.3	462.1	828.3	822.8	5.54	149.552		
1,700.0	1,689.8	1,688.2	1,688.1	4.1	3.0	170.57	521.1	460.5	843.7	837.8	5.90	142.895		
1,800.0	1,788.6	1,782.7	1,782.6	4.4	3.1	170.61	521.7	458.5	858.5	852.3	6.25	137.377		
1,900.0	1,887.3	1,877.9	1,877.8	4.7	3.3	170.66	522.8	456.9	874.0	867.4	6.60	132.512		
2,000.0	1,986.0	1,981.9	1,981.7	5.0	3.5	170.72	523.7	455.4	889.5	882.5	6.96	127.843		
2,100.0	2,084.7	2,085.7	2,085.5	5.3	3.7	170.76	524.3	453.2	904.2	896.9	7.32	123.548		
2,200.0	2,183.4	2,180.0	2,179.8	5.7	3.8	170.82	524.5	451.4	918.9	911.3	7.66	119.912		
2,300.0	2,282.1	2,274.5	2,274.4	6.0	4.0	170.90	525.0	450.2	934.2	926.2	8.01	116.676		
2,400.0	2,380.8	2,376.4	2,376.2	6.3	4.2	171.03	525.0	449.5	949.6	941.3	8.36	113.571		
2,500.0	2,479.5	2,472.1	2,471.9	6.6	4.3	171.17	524.6	449.1	964.9	956.2	8.70	110.851		
2,600.0	2,578.2	2,569.4	2,569.2	7.0	4.5	171.36	523.9	449.5	980.5	971.5	9.05	108.367		
2,700.0	2,676.9	2,667.1	2,666.9	7.3	4.7	171.55	523.1	450.1	996.2	986.8	9.39	106.064 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 12-29 - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 72-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		
9,400.0	8,016.0	8,236.6	7,972.6	28.0	31.1	84.04	1,818.5	-729.6	951.7	898.7	53.00	17.956		
9,500.0	8,016.0	8,238.6	7,974.5	29.1	31.1	84.64	1,818.5	-729.6	853.9	799.5	54.41	15.693		
9,600.0	8,016.0	8,240.5	7,976.5	30.3	31.1	85.23	1,818.5	-729.6	756.6	700.8	55.87	13.543		
9,700.0	8,016.0	8,242.5	7,978.4	31.5	31.1	85.83	1,818.6	-729.5	660.2	602.8	57.36	11.510		
9,800.0	8,016.0	8,244.4	7,980.3	32.8	31.1	86.42	1,818.6	-729.5	565.0	506.1	58.88	9.595		
9,900.0	8,016.0	8,246.4	7,982.3	34.1	31.1	87.01	1,818.6	-729.5	471.8	411.3	60.43	7.807		
10,000.0	8,016.0	8,248.3	7,984.2	35.5	31.1	87.61	1,818.7	-729.5	382.0	320.0	62.00	6.161		
10,100.0	8,016.0	8,250.2	7,986.1	36.8	31.1	88.20	1,818.7	-729.5	298.7	235.2	63.59	4.698		
10,200.0	8,016.0	8,252.1	7,988.0	38.3	31.1	88.78	1,818.8	-729.5	229.3	164.1	65.18	3.518		
10,300.0	8,016.0	8,254.0	7,990.0	39.7	31.1	89.37	1,818.8	-729.5	189.5	122.7	66.79	2.837		
10,333.4	8,016.0	8,254.7	7,990.6	40.2	31.1	89.57	1,818.8	-729.5	186.5	119.2	67.33	2.770	CC, ES, SF	
10,400.0	8,016.0	8,255.9	7,991.9	41.2	31.1	89.96	1,818.8	-729.4	198.1	129.6	68.41	2.895		
10,500.0	8,016.0	8,257.8	7,993.8	42.7	31.1	90.54	1,818.9	-729.4	250.1	180.0	70.03	3.571		
10,600.0	8,016.0	8,259.7	7,995.7	44.2	31.1	91.12	1,818.9	-729.4	325.3	253.7	71.66	4.540		
10,700.0	8,016.0	8,261.6	7,997.5	45.7	31.1	91.70	1,818.9	-729.4	411.3	338.0	73.29	5.612		
10,800.0	8,016.0	8,263.5	7,999.4	47.3	31.1	92.28	1,819.0	-729.4	502.4	427.5	74.91	6.707		
10,900.0	8,016.0	8,265.4	8,001.3	48.8	31.1	92.85	1,819.0	-729.4	596.4	519.9	76.54	7.792		
11,000.0	8,016.0	8,267.3	8,003.2	50.4	31.1	93.43	1,819.0	-729.4	692.1	613.9	78.17	8.854		
11,100.0	8,016.0	8,269.1	8,005.0	52.0	31.1	94.00	1,819.1	-729.3	788.8	709.0	79.79	9.886		
11,200.0	8,016.0	8,271.0	8,006.9	53.6	31.1	94.56	1,819.1	-729.3	886.3	804.9	81.41	10.886		
11,300.0	8,016.0	8,272.8	8,008.8	55.2	31.2	95.13	1,819.2	-729.3	984.3	901.2	83.03	11.854		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 2 - SYNERGY - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-147.44	-408.0	-260.5	484.2					
100.0	100.0	89.2	89.2	0.2	0.2	-147.46	-407.9	-260.3	483.9	483.6	0.31	1,573.411		
200.0	200.0	189.3	189.3	0.3	0.3	-147.48	-407.8	-260.0	483.7	483.0	0.66	736.358		
300.0	300.0	288.6	288.6	0.5	0.5	-147.47	-407.6	-259.9	483.5	482.5	1.00	481.199		
400.0	400.0	388.5	388.5	0.7	0.7	-20.31	-407.5	-259.9	482.5	481.2	1.35	356.520		
500.0	500.0	488.7	488.7	0.9	0.9	-20.44	-407.5	-259.8	480.0	478.3	1.70	281.851		
600.0	599.9	586.5	586.5	1.0	1.0	-20.63	-407.5	-259.8	475.9	473.9	2.05	232.288		
700.0	699.7	685.8	685.8	1.2	1.2	-20.90	-407.8	-260.1	470.6	468.2	2.40	196.209		
800.0	799.4	784.5	784.5	1.4	1.4	-21.25	-408.1	-260.4	463.8	461.0	2.75	168.740		
900.0	898.9	884.6	884.6	1.7	1.5	-21.71	-408.6	-260.8	455.4	452.3	3.10	146.761		
1,000.0	998.3	983.8	983.7	1.9	1.7	-22.28	-409.0	-261.2	445.4	442.0	3.46	128.747		
1,100.0	1,097.4	1,083.8	1,083.8	2.2	1.9	-22.92	-409.2	-261.8	433.9	430.0	3.82	113.499		
1,200.0	1,196.3	1,183.8	1,183.8	2.5	2.1	-23.69	-409.1	-262.4	420.5	416.3	4.19	100.322		
1,300.0	1,295.0	1,280.1	1,280.1	2.8	2.2	-24.55	-409.3	-262.8	406.2	401.7	4.56	89.017		
1,400.0	1,393.7	1,378.7	1,378.7	3.1	2.4	-25.53	-410.0	-263.1	392.5	387.5	4.95	79.338		
1,500.0	1,492.4	1,477.7	1,477.6	3.4	2.6	-26.54	-410.6	-263.6	378.8	373.4	5.34	70.968		
1,600.0	1,591.1	1,577.5	1,577.5	3.7	2.8	-27.54	-410.8	-264.7	365.1	359.4	5.74	63.659		
1,700.0	1,689.8	1,677.8	1,677.8	4.1	2.9	-28.60	-410.6	-265.7	351.1	345.0	6.14	57.185		
1,800.0	1,788.6	1,776.2	1,776.1	4.4	3.1	-29.77	-410.3	-266.3	337.1	330.6	6.55	51.462		
1,900.0	1,887.3	1,874.8	1,874.8	4.7	3.3	-31.11	-410.3	-266.7	323.4	316.5	6.97	46.386		
2,000.0	1,986.0	1,973.1	1,973.0	5.0	3.4	-32.56	-410.3	-267.2	310.0	302.6	7.40	41.863		
2,100.0	2,084.7	2,071.4	2,071.4	5.3	3.6	-34.12	-410.5	-267.7	296.9	289.1	7.85	37.830		
2,200.0	2,183.4	2,170.0	2,169.9	5.7	3.8	-35.79	-410.8	-268.5	284.2	275.9	8.31	34.215		
2,300.0	2,282.1	2,269.2	2,269.2	6.0	4.0	-37.62	-411.0	-269.3	271.7	263.0	8.78	30.951		
2,400.0	2,380.8	2,368.6	2,368.5	6.3	4.1	-39.62	-411.0	-270.1	259.4	250.1	9.27	27.978		
2,500.0	2,479.5	2,468.3	2,468.2	6.6	4.3	-41.79	-410.8	-270.9	247.1	237.3	9.78	25.264		
2,600.0	2,578.2	2,567.9	2,567.9	7.0	4.5	-44.17	-410.1	-271.8	234.8	224.5	10.31	22.772		
2,700.0	2,676.9	2,667.5	2,667.4	7.3	4.7	-46.79	-409.1	-272.7	222.6	211.7	10.86	20.491		
2,800.0	2,775.6	2,766.2	2,766.1	7.6	4.8	-49.73	-407.8	-273.3	210.6	199.2	11.44	18.416		
2,900.0	2,874.3	2,864.6	2,864.5	8.0	5.0	-53.03	-406.7	-273.9	199.4	187.4	12.04	16.565		
3,000.0	2,973.0	2,963.2	2,963.1	8.3	5.2	-56.68	-405.6	-274.5	189.0	176.3	12.66	14.926		
3,100.0	3,071.8	3,062.1	3,062.0	8.6	5.4	-60.69	-404.6	-275.4	179.4	166.1	13.31	13.484		
3,200.0	3,170.5	3,161.4	3,161.3	8.9	5.5	-65.09	-403.3	-276.4	170.6	156.7	13.96	12.219		
3,300.0	3,269.2	3,260.3	3,260.2	9.3	5.7	-69.80	-401.8	-277.8	162.6	148.0	14.62	11.119		
3,400.0	3,367.9	3,358.4	3,358.2	9.6	5.9	-74.85	-400.5	-279.3	155.9	140.6	15.27	10.210		
3,500.0	3,466.6	3,456.6	3,456.4	9.9	6.0	-80.48	-399.5	-280.1	151.1	135.2	15.89	9.508		
3,600.0	3,565.3	3,555.8	3,555.6	10.3	6.2	-86.55	-398.4	-280.8	147.9	131.4	16.47	8.983		
3,700.0	3,664.0	3,654.9	3,654.7	10.6	6.4	-93.04	-396.5	-281.2	146.0	129.1	16.97	8.606		
3,752.5	3,715.8	3,706.6	3,706.4	10.8	6.5	-96.46	-395.5	-281.5	145.8	128.6	17.20	8.477 CC, ES		
3,800.0	3,762.7	3,753.3	3,753.1	10.9	6.6	-99.56	-394.6	-281.7	146.0	128.6	17.38	8.401		
3,900.0	3,861.4	3,851.5	3,851.2	11.3	6.7	-105.98	-392.8	-282.1	148.2	130.5	17.70	8.370 SF		
4,000.0	3,960.1	3,950.2	3,950.0	11.6	6.9	-112.05	-391.4	-282.5	152.3	134.4	17.94	8.489		
4,100.0	4,058.8	4,049.6	4,049.3	11.9	7.1	-117.84	-389.7	-283.1	157.8	139.6	18.11	8.709		
4,200.0	4,157.5	4,148.5	4,148.2	12.2	7.3	-123.24	-387.7	-284.1	164.3	146.0	18.23	9.011		
4,300.0	4,256.2	4,246.7	4,246.4	12.6	7.4	-128.18	-385.6	-285.0	172.2	153.9	18.32	9.403		
4,400.0	4,355.0	4,344.6	4,344.2	12.9	7.6	-132.75	-383.3	-285.5	181.7	163.4	18.38	9.888		
4,500.0	4,453.7	4,442.9	4,442.5	13.2	7.8	-136.88	-381.0	-285.7	192.6	174.2	18.45	10.442		
4,600.0	4,552.4	4,542.0	4,541.6	13.6	8.0	-140.51	-379.0	-286.1	204.2	185.7	18.53	11.023		
4,700.0	4,651.1	4,641.0	4,640.6	13.9	8.1	-143.71	-377.1	-286.8	216.2	197.6	18.63	11.605		
4,800.0	4,749.8	4,738.9	4,738.5	14.2	8.3	-146.52	-375.2	-287.4	228.9	210.1	18.75	12.203		
4,900.0	4,848.5	4,836.5	4,836.1	14.6	8.5	-149.05	-373.3	-287.6	242.5	223.6	18.90	12.830		
5,000.0	4,947.2	4,935.1	4,934.6	14.9	8.7	-151.31	-371.4	-287.6	256.6	237.6	19.06	13.463		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 2 - SYNERGY - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-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	5,045.9	5,034.1	5,033.6	15.2	8.8	-153.34	-369.5	-287.8	271.1	251.8	19.24	14.085		
5,200.0	5,144.6	5,133.0	5,132.5	15.6	9.0	-155.14	-367.7	-288.1	285.6	266.1	19.45	14.685		
5,300.0	5,243.3	5,231.7	5,231.1	15.9	9.2	-156.77	-366.0	-288.4	300.3	280.7	19.66	15.273		
5,400.0	5,342.0	5,330.8	5,330.3	16.2	9.3	-158.22	-364.4	-288.9	315.1	295.2	19.90	15.838		
5,500.0	5,440.7	5,430.1	5,429.5	16.5	9.5	-159.47	-363.2	-289.3	330.0	309.9	20.15	16.380		
5,600.0	5,539.4	5,529.8	5,529.2	16.9	9.7	-160.60	-362.3	-290.1	344.6	324.2	20.41	16.882		
5,700.0	5,638.2	5,626.2	5,625.7	17.2	9.9	-161.54	-361.7	-290.5	359.6	338.9	20.69	17.382		
5,800.0	5,736.9	5,723.8	5,723.3	17.5	10.0	-162.43	-360.8	-290.4	375.2	354.3	20.97	17.896		
5,900.0	5,835.6	5,824.5	5,824.0	17.9	10.2	-163.30	-359.9	-290.6	390.7	369.4	21.25	18.380		
6,000.0	5,934.3	5,923.3	5,922.8	18.2	10.4	-164.01	-359.5	-290.9	405.9	384.4	21.55	18.836		
6,100.0	6,033.0	6,021.9	6,021.4	18.5	10.6	-164.69	-359.0	-291.2	421.3	399.4	21.85	19.279		
6,200.0	6,131.7	6,120.2	6,119.7	18.9	10.7	-165.33	-358.4	-291.5	436.7	414.6	22.15	19.714		
6,300.0	6,230.4	6,219.2	6,218.7	19.2	10.9	-165.94	-357.7	-291.8	452.3	429.8	22.46	20.136		
6,400.0	6,329.1	6,318.2	6,317.7	19.5	11.1	-166.51	-357.1	-292.2	467.7	445.0	22.77	20.543		
6,500.0	6,427.8	6,416.6	6,416.1	19.9	11.2	-167.00	-356.8	-292.5	483.2	460.1	23.08	20.934		
6,600.0	6,526.5	6,512.5	6,512.0	20.2	11.4	-167.47	-356.2	-292.5	499.1	475.7	23.40	21.335		
6,700.0	6,625.2	6,613.0	6,612.4	20.5	11.6	-167.95	-355.3	-292.5	515.1	491.4	23.71	21.722		
6,800.0	6,723.9	6,712.0	6,711.4	20.9	11.8	-168.45	-354.1	-292.9	531.0	506.9	24.03	22.095		
6,900.0	6,822.6	6,812.0	6,811.4	21.2	11.9	-168.95	-352.8	-293.6	546.7	522.3	24.35	22.451		
7,000.0	6,921.4	6,910.7	6,910.1	21.5	12.1	-169.42	-351.5	-294.4	562.2	537.6	24.67	22.793		
7,100.0	7,020.1	7,005.3	7,004.7	21.8	12.3	-169.83	-350.2	-294.8	578.2	553.2	24.98	23.147		
7,200.0	7,118.8	7,103.4	7,102.8	22.2	12.5	-170.21	-349.0	-294.8	594.6	569.3	25.30	23.499		
7,300.0	7,217.5	7,197.7	7,197.1	22.5	12.6	-170.54	-347.7	-294.3	611.4	585.8	25.62	23.861		
7,400.0	7,316.2	7,295.4	7,294.8	22.8	12.8	-170.88	-346.1	-293.6	628.7	602.7	25.95	24.226		
7,500.0	7,414.9	7,387.8	7,387.2	23.2	13.0	175.34	-344.3	-292.6	646.2	619.9	26.27	24.599		
7,600.0	7,514.0	7,484.0	7,483.3	23.3	13.1	108.56	-342.7	-290.5	658.6	632.0	26.61	24.751		
7,700.0	7,611.0	7,580.5	7,579.8	23.4	13.3	86.46	-341.5	-288.0	663.2	636.3	26.97	24.595		
7,800.0	7,703.0	7,670.0	7,669.2	23.3	13.4	81.46	-340.5	-285.4	661.5	634.1	27.38	24.157		
7,900.0	7,787.3	7,754.4	7,753.5	23.1	13.6	82.04	-339.7	-282.7	656.0	628.1	27.91	23.506		
8,000.0	7,861.3	7,830.3	7,829.4	22.8	13.7	84.94	-339.0	-280.4	650.0	621.5	28.44	22.852		
8,092.7	7,918.6	7,889.3	7,888.4	22.6	13.8	88.06	-338.7	-278.7	647.4	618.6	28.77	22.504		
8,100.0	7,922.7	7,893.5	7,892.6	22.6	13.8	88.29	-338.7	-278.6	647.4	618.6	28.78	22.495		
8,200.0	7,969.6	7,942.6	7,941.7	22.3	13.9	90.85	-338.6	-277.3	652.3	623.4	28.85	22.611		
8,300.0	8,000.7	7,974.9	7,973.9	22.2	14.0	91.56	-338.6	-276.5	667.6	638.8	28.77	23.207		
8,400.0	8,015.1	7,989.4	7,988.5	22.1	14.0	89.85	-338.6	-276.2	694.4	665.7	28.71	24.190		
8,500.0	8,016.0	7,990.1	7,989.1	22.1	14.0	88.71	-338.6	-276.2	732.4	703.6	28.77	25.459		
8,600.0	8,016.0	7,989.8	7,988.8	22.3	14.0	88.68	-338.6	-276.2	781.3	752.2	29.04	26.900		
8,700.0	8,016.0	7,989.5	7,988.5	22.6	14.0	88.66	-338.6	-276.2	839.3	809.7	29.51	28.437		
8,800.0	8,016.0	7,989.2	7,988.2	23.1	14.0	88.63	-338.6	-276.2	904.6	874.5	30.16	29.994		
8,900.0	8,016.0	7,988.9	7,988.0	23.6	14.0	88.61	-338.6	-276.2	975.9	944.9	30.97	31.515		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 2-0-29 - ENCANA - SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 41-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		
11,600.0	8,016.0	8,061.9	7,954.5	60.0	21.8	88.18	3,684.6	-126.6	981.6	908.7	72.91	13.462		
11,700.0	8,016.0	8,063.2	7,955.7	61.7	21.8	88.27	3,684.6	-126.6	923.4	848.8	74.62	12.375		
11,800.0	8,016.0	8,064.4	7,956.9	63.3	21.8	88.36	3,684.6	-126.5	872.8	796.5	76.32	11.436		
11,900.0	8,016.0	8,065.6	7,958.1	65.0	21.8	88.45	3,684.6	-126.5	831.2	753.2	78.03	10.653		
12,000.0	8,016.0	8,066.8	7,959.3	66.6	21.8	88.54	3,684.6	-126.5	800.0	720.3	79.74	10.033		
12,100.0	8,016.0	8,068.0	7,960.5	68.3	21.8	88.63	3,684.6	-126.4	780.5	699.0	81.45	9.582		
12,200.0	8,016.0	8,069.2	7,961.7	69.9	21.8	88.72	3,684.6	-126.4	773.5	690.3	83.16	9.300		
12,204.4	8,016.0	8,069.3	7,961.8	70.0	21.8	88.72	3,684.6	-126.4	773.4	690.2	83.24	9.292 CC, ES		
12,300.0	8,016.0	8,070.4	7,962.9	71.6	21.8	88.81	3,684.6	-126.4	779.3	694.4	84.88	9.181 SF		
12,400.0	8,016.0	8,071.6	7,964.1	73.3	21.8	88.90	3,684.7	-126.4	797.8	711.2	86.60	9.212		
12,500.0	8,016.0	8,072.9	7,965.4	75.0	21.8	88.99	3,684.7	-126.3	828.0	739.7	88.32	9.375		
12,600.0	8,016.0	8,074.1	7,966.6	76.6	21.8	89.08	3,684.7	-126.3	868.7	778.7	90.04	9.648		
12,700.0	8,016.0	8,075.3	7,967.8	78.3	21.8	89.17	3,684.7	-126.3	918.6	826.8	91.77	10.010		
12,800.0	8,016.0	8,076.5	7,969.0	80.0	21.8	89.26	3,684.7	-126.3	976.2	882.7	93.49	10.441		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 2-4-29 - ENCANA - SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 71-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		
9,200.0	8,016.0	8,491.6	7,943.7	26.0	43.9	87.54	1,224.5	-100.2	985.7	925.1	60.61	16.263		
9,300.0	8,016.0	8,491.0	7,943.2	26.9	43.9	87.50	1,224.5	-100.3	934.2	872.4	61.85	15.105		
9,400.0	8,016.0	8,490.4	7,942.6	28.0	43.9	87.46	1,224.5	-100.3	891.0	827.8	63.15	14.109		
9,500.0	8,016.0	8,489.8	7,942.0	29.1	43.9	87.42	1,224.5	-100.3	857.3	792.8	64.51	13.289		
9,600.0	8,016.0	8,489.2	7,941.4	30.3	43.9	87.37	1,224.5	-100.4	834.3	768.4	65.92	12.657		
9,700.0	8,016.0	8,488.6	7,940.7	31.5	43.9	87.33	1,224.5	-100.4	822.9	755.5	67.36	12.215		
9,744.6	8,016.0	8,488.4	7,940.5	32.1	43.9	87.31	1,224.5	-100.4	821.6	753.6	68.02	12.079 CC, ES		
9,800.0	8,016.0	8,488.0	7,940.1	32.8	43.9	87.29	1,224.5	-100.4	823.5	754.7	68.85	11.962		
9,900.0	8,016.0	8,487.4	7,939.5	34.1	43.9	87.24	1,224.5	-100.4	836.2	765.9	70.36	11.885 SF		
10,000.0	8,016.0	8,486.8	7,938.9	35.5	43.9	87.20	1,224.5	-100.5	860.4	788.5	71.89	11.968		
10,100.0	8,016.0	8,486.1	7,938.3	36.8	43.9	87.16	1,224.5	-100.5	895.2	821.8	73.45	12.188		
10,200.0	8,016.0	8,485.5	7,937.6	38.3	43.9	87.11	1,224.5	-100.5	939.4	864.4	75.02	12.522		
10,300.0	8,016.0	8,484.9	7,937.0	39.7	43.9	87.07	1,224.5	-100.6	991.7	915.1	76.61	12.945		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT F UNIT 1 - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8585-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		
10,900.0	8,016.0	7,967.0	7,967.0	48.8	13.9	-90.00	3,313.5	-1,000.6	930.8	870.9	59.90	15.538		
11,000.0	8,016.0	7,967.0	7,967.0	50.4	13.9	-90.00	3,313.5	-1,000.6	831.4	769.8	61.57	13.504		
11,100.0	8,016.0	7,967.0	7,967.0	52.0	13.9	-90.00	3,313.5	-1,000.6	732.2	668.9	63.24	11.578		
11,200.0	8,016.0	7,967.0	7,967.0	53.6	13.9	-90.00	3,313.5	-1,000.6	633.2	568.3	64.92	9.754		
11,300.0	8,016.0	7,967.0	7,967.0	55.2	13.9	-90.00	3,313.5	-1,000.6	534.6	468.0	66.60	8.028		
11,400.0	8,016.0	7,967.0	7,967.0	56.8	13.9	-90.00	3,313.5	-1,000.6	436.7	368.4	68.28	6.395		
11,500.0	8,016.0	7,967.0	7,967.0	58.4	13.9	-90.00	3,313.5	-1,000.6	340.0	270.0	69.97	4.858		
11,600.0	8,016.0	7,967.0	7,967.0	60.0	13.9	-90.00	3,313.5	-1,000.6	245.9	174.2	71.67	3.431		
11,700.0	8,016.0	7,967.0	7,967.0	61.7	13.9	-90.00	3,313.5	-1,000.6	159.1	85.8	73.37	2.169		
11,800.0	8,016.0	7,967.0	7,967.0	63.3	13.9	-90.00	3,313.5	-1,000.6	101.0	25.9	75.07	1.345 Level 3		
11,825.6	8,016.0	7,967.0	7,967.0	63.7	13.9	-90.00	3,313.5	-1,000.6	97.6	22.1	75.50	1.293 Level 3, CC, ES, SF		
11,900.0	8,016.0	7,967.0	7,967.0	65.0	13.9	-90.00	3,313.5	-1,000.6	122.7	46.0	76.77	1.599		
12,000.0	8,016.0	7,967.0	7,967.0	66.6	13.9	-90.00	3,313.5	-1,000.6	199.8	121.4	78.48	2.546		
12,100.0	8,016.0	7,967.0	7,967.0	68.3	13.9	-90.00	3,313.5	-1,000.6	291.2	211.0	80.19	3.632		
12,200.0	8,016.0	7,967.0	7,967.0	69.9	13.9	-90.00	3,313.5	-1,000.6	386.9	305.0	81.90	4.724		
12,300.0	8,016.0	7,967.0	7,967.0	71.6	13.9	-90.00	3,313.5	-1,000.6	484.3	400.7	83.61	5.792		
12,400.0	8,016.0	7,967.0	7,967.0	73.3	13.9	-90.00	3,313.5	-1,000.6	582.6	497.3	85.33	6.828		
12,500.0	8,016.0	7,967.0	7,967.0	75.0	13.9	-90.00	3,313.5	-1,000.6	681.4	594.3	87.05	7.828		
12,600.0	8,016.0	7,967.0	7,967.0	76.6	13.9	-90.00	3,313.5	-1,000.6	780.5	691.7	88.76	8.793		
12,700.0	8,016.0	7,967.0	7,967.0	78.3	13.9	-90.00	3,313.5	-1,000.6	879.8	789.3	90.48	9.723		
12,800.0	8,016.0	7,967.0	7,967.0	80.0	13.9	-90.00	3,313.5	-1,000.6	979.2	887.0	92.21	10.620		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 13-29D - SYNERGY - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 248-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	-146.28	-408.3	-272.5	490.9					
100.0	100.0	98.0	98.0	0.2	0.2	-146.25	-408.5	-273.0	491.3	491.0	0.32	1,538.521		
200.0	200.0	194.0	194.0	0.3	0.3	-146.14	-409.0	-274.4	492.6	491.9	0.66	748.469		
300.0	300.0	297.7	297.7	0.5	0.5	-145.95	-409.5	-276.7	494.2	493.2	1.01	488.748		
400.0	400.0	412.4	412.3	0.7	0.7	-18.47	-407.4	-278.7	492.9	491.5	1.39	355.260		
500.0	500.0	528.2	527.8	0.9	1.0	-17.76	-399.8	-282.1	486.7	484.9	1.80	270.005		
600.0	599.9	636.2	634.9	1.0	1.2	-16.50	-387.4	-288.1	476.4	474.2	2.25	211.640		
700.0	699.7	745.7	742.7	1.2	1.6	-14.67	-370.3	-296.4	462.6	459.9	2.76	167.581		
800.0	799.4	847.9	842.8	1.4	2.0	-12.55	-351.1	-304.9	445.6	442.3	3.29	135.245		
900.0	898.9	944.9	937.3	1.7	2.4	-10.15	-331.6	-314.4	427.6	423.7	3.85	111.155		
1,000.0	998.3	1,044.7	1,034.4	1.9	2.8	-7.39	-310.5	-324.1	407.9	403.4	4.43	92.029		
1,100.0	1,097.4	1,138.2	1,125.1	2.2	3.2	-4.45	-290.2	-333.7	387.5	382.5	5.01	77.282		
1,200.0	1,196.3	1,232.0	1,216.1	2.5	3.6	-1.12	-269.8	-343.9	367.1	361.4	5.61	65.429		
1,300.0	1,295.0	1,324.8	1,306.2	2.8	4.0	2.57	-249.8	-354.4	347.3	341.1	6.22	55.842		
1,400.0	1,393.7	1,415.7	1,394.2	3.1	4.5	6.58	-230.6	-365.6	330.2	323.4	6.83	48.341		
1,500.0	1,492.4	1,508.3	1,483.9	3.4	4.9	11.10	-211.2	-378.2	316.4	308.9	7.46	42.411		
1,600.0	1,591.1	1,604.9	1,577.5	3.7	5.3	16.19	-190.9	-391.4	305.0	296.9	8.10	37.659		
1,700.0	1,689.8	1,701.2	1,670.7	4.1	5.8	21.54	-170.8	-404.1	295.9	287.2	8.72	33.931		
1,800.0	1,788.6	1,797.2	1,763.7	4.4	6.2	27.21	-150.3	-416.7	289.4	280.1	9.33	31.018		
1,900.0	1,887.3	1,893.8	1,857.2	4.7	6.7	33.17	-129.3	-429.0	285.9	276.0	9.92	28.831		
1,985.5	1,971.7	1,977.1	1,937.9	5.0	7.1	38.37	-111.1	-438.9	284.9	274.5	10.39	27.427		
2,000.0	1,986.0	1,990.9	1,951.2	5.0	7.1	39.24	-108.1	-440.5	284.9	274.4	10.46	27.228		
2,100.0	2,084.7	2,085.6	2,042.8	5.3	7.6	45.29	-86.7	-451.5	287.1	276.2	10.96	26.194		
2,200.0	2,183.4	2,180.1	2,134.1	5.7	8.1	51.24	-65.0	-462.5	293.0	281.6	11.40	25.701		
2,300.0	2,282.1	2,275.6	2,226.6	6.0	8.5	56.90	-43.5	-473.7	302.1	290.3	11.78	25.641		
2,400.0	2,380.8	2,369.9	2,317.8	6.3	8.9	62.06	-22.8	-484.7	313.9	301.8	12.12	25.902		
2,500.0	2,479.5	2,462.8	2,407.6	6.6	9.4	66.86	-1.7	-495.9	329.1	316.6	12.43	26.481		
2,600.0	2,578.2	2,558.8	2,500.4	7.0	9.9	71.40	20.2	-507.4	346.4	333.7	12.71	27.262		
2,700.0	2,676.9	2,654.6	2,593.1	7.3	10.3	75.40	41.3	-519.0	365.4	352.5	12.98	28.145		
2,800.0	2,775.6	2,750.4	2,685.9	7.6	10.8	79.02	62.4	-530.4	385.9	372.6	13.27	29.086		
2,900.0	2,874.3	2,846.9	2,779.4	8.0	11.2	82.30	83.4	-541.7	407.5	393.9	13.56	30.038		
3,000.0	2,973.0	2,942.4	2,872.0	8.3	11.6	85.24	104.0	-552.7	429.9	416.0	13.88	30.968		
3,100.0	3,071.8	3,037.0	2,963.7	8.6	12.1	87.86	124.4	-563.6	453.4	439.2	14.22	31.885		
3,200.0	3,170.5	3,132.6	3,056.4	8.9	12.5	90.23	145.0	-574.8	477.8	463.2	14.58	32.762		
3,300.0	3,269.2	3,231.1	3,151.9	9.3	13.0	92.47	166.1	-586.0	502.6	487.6	14.97	33.571		
3,400.0	3,367.9	3,326.6	3,244.8	9.6	13.4	94.42	185.9	-596.6	527.4	512.0	15.38	34.290		
3,500.0	3,466.6	3,416.2	3,331.7	9.9	13.8	96.10	205.0	-606.8	553.3	537.5	15.80	35.015		
3,600.0	3,565.3	3,505.0	3,417.6	10.3	14.3	97.63	224.8	-617.4	580.8	564.6	16.24	35.770		
3,700.0	3,664.0	3,603.1	3,512.3	10.6	14.7	99.16	247.2	-629.4	609.3	592.6	16.70	36.483		
3,800.0	3,762.7	3,701.5	3,607.8	10.9	15.2	100.63	268.9	-640.2	636.9	619.7	17.18	37.080		
3,900.0	3,861.4	3,791.8	3,695.2	11.3	15.6	101.85	289.0	-650.3	665.2	647.5	17.65	37.683		
4,000.0	3,960.1	3,880.8	3,781.1	11.6	16.1	102.87	309.1	-661.7	694.5	676.4	18.14	38.296		
4,100.0	4,058.8	3,973.3	3,870.4	11.9	16.5	103.84	330.5	-673.7	724.8	706.1	18.63	38.896		
4,200.0	4,157.5	4,085.7	3,978.9	12.2	17.0	104.93	355.7	-688.1	754.5	735.4	19.18	39.346		
4,300.0	4,256.2	4,199.0	4,089.2	12.6	17.5	105.95	378.3	-701.1	781.6	761.8	19.73	39.612		
4,400.0	4,355.0	4,323.5	4,211.0	12.9	18.0	107.05	400.2	-713.6	806.2	785.9	20.31	39.690		
4,500.0	4,453.7	4,451.0	4,336.8	13.2	18.4	108.12	418.3	-724.6	827.4	806.5	20.91	39.569		
4,600.0	4,552.4	4,569.1	4,453.8	13.6	18.7	109.10	431.8	-733.0	845.7	824.2	21.49	39.351		
4,700.0	4,651.1	4,688.5	4,572.5	13.9	19.0	110.13	443.1	-739.5	861.8	839.8	22.07	39.052		
4,800.0	4,749.8	4,807.1	4,690.7	14.2	19.2	111.20	451.8	-743.8	875.6	853.0	22.65	38.663		
4,900.0	4,848.5	4,918.5	4,801.8	14.6	19.4	112.15	458.0	-747.7	887.9	864.7	23.21	38.257		
5,000.0	4,947.2	5,047.3	4,930.5	14.9	19.6	113.29	462.7	-750.3	898.3	874.5	23.80	37.740		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 13-29D - SYNERGY - SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 248-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)				Between Ellipses (ft)	
5,100.0	5,045.9	5,149.5	5,032.7	15.2	19.7	114.19	464.3	-751.5	906.6	882.3	24.34	37.248		
5,200.0	5,144.6	5,250.3	5,133.5	15.6	19.8	115.01	465.5	-753.5	915.0	890.1	24.88	36.780		
5,300.0	5,243.3	5,349.3	5,232.4	15.9	19.9	115.76	466.4	-756.1	923.3	897.9	25.41	36.342		
5,400.0	5,342.0	5,450.9	5,334.0	16.2	20.0	116.51	467.2	-758.9	931.8	905.9	25.93	35.930		
5,500.0	5,440.7	5,563.4	5,446.5	16.5	20.1	117.37	467.3	-760.9	939.5	913.0	26.47	35.494		
5,600.0	5,539.4	5,665.0	5,548.0	16.9	20.2	118.21	466.3	-761.5	946.2	919.2	26.98	35.073		
5,700.0	5,638.2	5,756.9	5,640.0	17.2	20.2	118.96	466.0	-761.9	953.6	926.1	27.46	34.722		
5,800.0	5,736.9	5,850.6	5,733.7	17.5	20.3	119.73	466.2	-762.3	961.9	933.9	27.95	34.414		
5,900.0	5,835.6	5,946.1	5,829.2	17.9	20.4	120.49	466.8	-762.8	970.7	942.3	28.44	34.136		
6,000.0	5,934.3	6,042.4	5,925.5	18.2	20.5	121.23	467.7	-763.5	980.0	951.1	28.92	33.891		
6,100.0	6,033.0	6,139.5	6,022.6	18.5	20.7	121.98	468.8	-764.2	989.7	960.3	29.39	33.670		
6,200.0	6,131.7	6,239.5	6,122.6	18.9	20.8	122.74	470.0	-764.7	999.6	969.7	29.87	33.466		
8,000.0	7,861.3	7,958.1	7,840.4	22.8	22.3	24.50	475.5	-726.4	967.5	937.8	29.73	32.545		
8,100.0	7,922.7	8,018.8	7,901.1	22.6	22.4	28.42	476.8	-725.4	893.9	866.0	27.84	32.108		
8,200.0	7,969.6	8,066.8	7,949.0	22.3	22.4	36.42	478.1	-724.9	810.9	783.5	27.44	29.554		
8,300.0	8,000.7	8,100.1	7,982.4	22.2	22.5	51.50	479.0	-724.6	721.3	691.2	30.14	23.930		
8,400.0	8,015.1	8,117.0	7,999.3	22.1	22.5	76.01	479.4	-724.5	628.1	593.4	34.70	18.102		
8,500.0	8,016.0	8,120.7	8,002.9	22.1	22.5	85.76	479.5	-724.5	534.6	498.9	35.64	14.999		
8,600.0	8,016.0	8,123.5	8,005.7	22.3	22.5	86.53	479.6	-724.4	443.7	407.8	35.96	12.338		
8,700.0	8,016.0	8,126.2	8,008.4	22.6	22.5	87.30	479.7	-724.4	357.8	321.4	36.48	9.809		
8,800.0	8,016.0	8,129.0	8,011.2	23.1	22.5	88.08	479.7	-724.4	281.4	244.2	37.17	7.570		
8,900.0	8,016.0	8,131.7	8,013.9	23.6	22.5	88.86	479.8	-724.4	224.2	186.2	38.00	5.900		
8,994.6	8,016.0	8,134.4	8,016.6	24.3	22.5	89.60	479.9	-724.4	203.3	164.4	38.92	5.223 CC, ES		
9,000.0	8,016.0	8,134.5	8,016.7	24.3	22.5	89.64	479.9	-724.4	203.4	164.4	38.97	5.218 SF		
9,100.0	8,016.0	8,137.3	8,019.5	25.1	22.5	90.42	480.0	-724.3	229.0	188.9	40.05	5.718		
9,200.0	8,016.0	8,140.1	8,022.3	26.0	22.5	91.21	480.0	-724.3	289.0	247.7	41.22	7.010		
9,300.0	8,016.0	8,142.9	8,025.1	26.9	22.5	92.00	480.1	-724.3	366.8	324.3	42.46	8.639		
9,400.0	8,016.0	8,145.7	8,027.9	28.0	22.5	92.79	480.2	-724.3	453.4	409.6	43.76	10.361		
9,500.0	8,016.0	8,148.5	8,030.7	29.1	22.6	93.58	480.3	-724.3	544.6	499.5	45.11	12.072		
9,600.0	8,016.0	8,151.4	8,033.6	30.3	22.6	94.38	480.4	-724.2	638.4	591.9	46.50	13.730		
9,700.0	8,016.0	8,154.2	8,036.4	31.5	22.6	95.17	480.4	-724.2	733.9	686.0	47.91	15.316		
9,800.0	8,016.0	8,157.1	8,039.3	32.8	22.6	95.96	480.5	-724.2	830.4	781.0	49.35	16.825		
9,900.0	8,016.0	8,159.9	8,042.1	34.1	22.6	96.76	480.6	-724.2	927.6	876.8	50.81	18.258		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 14-29D - SYNERGY - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 126-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	-144.37	-408.7	-293.0	502.9					
100.0	100.0	94.7	94.7	0.2	0.2	-144.39	-409.3	-293.2	503.5	503.2	0.30	1,673.661		
200.0	200.0	193.2	193.2	0.3	0.3	-144.42	-410.7	-293.8	505.1	504.4	0.64	784.515		
300.0	300.0	294.0	294.0	0.5	0.5	-144.34	-411.5	-295.3	506.5	505.5	1.00	507.937		
400.0	400.0	390.2	390.1	0.7	0.7	-17.05	-412.2	-297.1	507.4	506.1	1.33	380.135		
500.0	500.0	485.5	485.4	0.9	0.8	-17.09	-414.0	-298.8	507.5	505.8	1.68	302.905		
600.0	599.9	582.7	582.5	1.0	1.0	-17.22	-416.6	-300.8	506.7	504.7	2.02	250.787		
700.0	699.7	680.0	679.8	1.2	1.2	-17.38	-419.5	-303.3	504.7	502.4	2.37	213.330		
800.0	799.4	779.5	779.2	1.4	1.4	-17.60	-422.5	-306.2	501.4	498.7	2.72	184.556		
900.0	898.9	879.0	878.7	1.7	1.6	-17.87	-425.6	-309.2	496.5	493.5	3.07	161.777		
1,000.0	998.3	982.8	982.3	1.9	1.8	-18.22	-428.5	-312.2	489.7	486.3	3.43	142.738		
1,100.0	1,097.4	1,086.0	1,085.5	2.2	2.0	-18.75	-431.0	-314.0	480.3	476.5	3.79	126.610		
1,200.0	1,196.3	1,178.0	1,177.4	2.5	2.1	-19.35	-433.7	-315.5	469.7	465.5	4.14	113.407		
1,300.0	1,295.0	1,265.2	1,264.4	2.8	2.3	-19.84	-437.3	-318.8	460.1	455.6	4.49	102.494		
1,400.0	1,393.7	1,353.5	1,352.5	3.1	2.5	-20.27	-442.6	-323.9	453.1	448.3	4.84	93.575		
1,500.0	1,492.4	1,442.1	1,440.5	3.4	2.7	-20.76	-449.9	-329.9	448.6	443.4	5.20	86.282		
1,600.0	1,591.1	1,530.3	1,528.0	3.7	3.0	-21.21	-458.9	-337.2	446.7	441.1	5.56	80.338		
1,619.5	1,610.4	1,547.4	1,544.9	3.8	3.0	-21.29	-460.8	-338.9	446.6	441.0	5.63	79.324		
1,700.0	1,689.8	1,618.7	1,615.3	4.1	3.2	-21.54	-469.3	-346.7	447.4	441.5	5.92	75.524		
1,800.0	1,788.6	1,709.0	1,704.0	4.4	3.5	-21.80	-481.5	-358.0	450.6	444.3	6.29	71.586		
1,900.0	1,887.3	1,802.3	1,795.4	4.7	3.8	-21.97	-495.2	-371.0	455.6	448.9	6.67	68.272		
2,000.0	1,986.0	1,893.8	1,884.7	5.0	4.2	-22.04	-509.3	-385.2	462.0	454.9	7.05	65.534		
2,100.0	2,084.7	1,986.8	1,975.0	5.3	4.6	-22.07	-525.0	-400.6	470.3	462.8	7.43	63.294		
2,200.0	2,183.4	2,086.1	2,071.3	5.7	5.0	-22.14	-542.5	-417.3	479.3	471.5	7.82	61.266		
2,300.0	2,282.1	2,181.0	2,163.4	6.0	5.4	-22.25	-559.6	-432.9	488.5	480.3	8.21	59.498		
2,400.0	2,380.8	2,281.6	2,260.7	6.3	5.8	-22.43	-578.7	-449.4	498.6	489.9	8.61	57.889		
2,500.0	2,479.5	2,380.8	2,356.9	6.6	6.3	-22.53	-596.9	-465.9	508.1	499.1	9.02	56.362		
2,600.0	2,578.2	2,485.7	2,458.5	7.0	6.7	-22.47	-615.1	-484.6	517.5	508.0	9.43	54.891		
2,700.0	2,676.9	2,591.4	2,561.2	7.3	7.2	-22.39	-632.2	-502.8	525.5	515.7	9.84	53.421		
2,800.0	2,775.6	2,685.2	2,652.3	7.6	7.6	-22.34	-647.5	-518.9	533.6	523.3	10.23	52.172		
2,900.0	2,874.3	2,777.9	2,742.0	8.0	8.0	-22.28	-663.6	-535.5	542.9	532.3	10.61	51.152		
3,000.0	2,973.0	2,876.9	2,837.8	8.3	8.5	-22.24	-681.4	-553.3	552.9	541.9	11.01	50.198		
3,100.0	3,071.8	2,980.1	2,937.6	8.6	9.0	-22.12	-699.2	-572.4	562.5	551.1	11.42	49.248		
3,200.0	3,170.5	3,080.5	3,034.8	8.9	9.4	-22.03	-716.4	-590.7	571.8	560.0	11.82	48.367		
3,300.0	3,269.2	3,181.4	3,132.7	9.3	9.9	-21.93	-733.4	-608.9	580.9	568.7	12.23	47.514		
3,400.0	3,367.9	3,281.7	3,229.9	9.6	10.4	-21.82	-750.1	-627.2	589.9	577.2	12.63	46.716		
3,500.0	3,466.6	3,380.3	3,325.4	9.9	10.8	-21.69	-766.4	-645.2	598.7	585.7	13.02	45.976		
3,600.0	3,565.3	3,482.6	3,424.5	10.3	11.3	-21.59	-783.5	-663.9	607.8	594.4	13.43	45.272		
3,700.0	3,664.0	3,582.1	3,521.1	10.6	11.7	-21.49	-799.6	-681.6	616.1	602.3	13.82	44.577		
3,800.0	3,762.7	3,677.1	3,613.2	10.9	12.2	-21.46	-815.9	-698.4	625.1	610.9	14.21	43.992		
3,900.0	3,861.4	3,779.2	3,712.1	11.3	12.7	-21.49	-834.0	-715.9	634.5	619.8	14.62	43.396		
4,000.0	3,960.1	3,882.3	3,812.2	11.6	13.1	-21.52	-851.6	-733.3	643.1	628.1	15.03	42.787		
4,100.0	4,058.8	3,976.5	3,903.6	11.9	13.6	-21.55	-867.8	-749.2	651.8	636.4	15.43	42.253		
4,200.0	4,157.5	4,083.8	4,007.7	12.2	14.0	-21.55	-886.2	-767.7	660.7	644.8	15.84	41.696		
4,300.0	4,256.2	4,184.6	4,105.7	12.6	14.5	-21.62	-903.2	-783.9	668.7	652.4	16.25	41.141		
4,400.0	4,355.0	4,295.5	4,213.7	12.9	15.0	-21.66	-921.1	-801.8	676.1	659.4	16.68	40.523		
4,500.0	4,453.7	4,432.4	4,348.1	13.2	15.4	-21.82	-939.4	-820.1	679.6	662.4	17.17	39.574		
4,600.0	4,552.4	4,555.2	4,469.6	13.6	15.8	-22.04	-951.6	-832.9	678.5	660.9	17.64	38.457		
4,700.0	4,651.1	4,682.5	4,596.1	13.9	16.1	-22.24	-960.5	-844.3	674.3	656.2	18.13	37.202		
4,800.0	4,749.8	4,826.9	4,740.2	14.2	16.3	-22.45	-963.4	-853.4	664.4	645.7	18.64	35.643		
4,900.0	4,848.5	4,944.1	4,857.3	14.6	16.4	-22.83	-961.9	-855.9	649.5	630.4	19.11	33.981		
5,000.0	4,947.2	5,045.7	4,958.8	14.9	16.5	-23.30	-960.0	-856.3	633.3	613.7	19.57	32.357		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 14-29D - SYNERGY - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 126-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		
5,100.0	5,045.9	5,145.0	5,058.2	15.2	16.5	-23.82	-958.0	-856.0	616.7	596.7	20.04	30.772		
5,200.0	5,144.6	5,239.8	5,153.0	15.6	16.6	-24.33	-956.4	-856.0	600.6	580.1	20.51	29.282		
5,300.0	5,243.3	5,336.1	5,249.2	15.9	16.7	-24.84	-955.0	-856.7	585.0	564.0	20.98	27.879		
5,400.0	5,342.0	5,434.7	5,347.8	16.2	16.8	-25.34	-953.4	-857.8	569.6	548.2	21.47	26.534		
5,500.0	5,440.7	5,532.5	5,445.6	16.5	16.9	-25.81	-951.7	-859.4	554.3	532.4	21.95	25.252		
5,600.0	5,539.4	5,629.3	5,542.3	16.9	17.0	-26.24	-950.0	-861.6	539.4	516.9	22.43	24.044		
5,700.0	5,638.2	5,727.3	5,640.3	17.2	17.1	-26.67	-948.4	-864.2	524.8	501.9	22.90	22.914		
5,800.0	5,736.9	5,826.5	5,739.5	17.5	17.2	-27.38	-947.8	-864.9	510.2	486.8	23.42	21.786		
5,900.0	5,835.6	5,926.0	5,839.0	17.9	17.3	-28.37	-948.0	-863.7	495.6	471.6	24.01	20.643		
6,000.0	5,934.3	6,026.1	5,939.0	18.2	17.4	-29.37	-947.7	-862.8	480.9	456.3	24.61	19.539		
6,100.0	6,033.0	6,125.3	6,038.3	18.5	17.5	-30.34	-946.9	-862.5	466.1	440.9	25.22	18.483		
6,200.0	6,131.7	6,224.2	6,137.1	18.9	17.6	-31.34	-945.9	-862.3	451.3	425.5	25.84	17.469		
6,300.0	6,230.4	6,322.9	6,235.9	19.2	17.7	-32.36	-944.8	-862.4	436.7	410.2	26.48	16.493		
6,400.0	6,329.1	6,421.7	6,334.6	19.5	17.8	-33.35	-943.4	-863.2	422.1	395.0	27.12	15.566		
6,500.0	6,427.8	6,518.6	6,431.5	19.9	17.9	-34.37	-942.1	-864.3	407.9	380.1	27.76	14.691		
6,600.0	6,526.5	6,616.0	6,528.9	20.2	18.0	-35.49	-941.4	-865.2	394.3	365.8	28.44	13.861		
6,700.0	6,625.2	6,715.5	6,628.4	20.5	18.1	-36.75	-940.7	-866.0	380.9	351.7	29.17	13.058		
6,800.0	6,723.9	6,815.5	6,728.4	20.9	18.2	-38.12	-939.8	-866.7	367.3	337.4	29.93	12.274		
6,900.0	6,822.6	6,915.1	6,828.0	21.2	18.3	-39.61	-938.5	-867.1	353.7	323.0	30.72	11.512		
7,000.0	6,921.4	7,014.8	6,927.7	21.5	18.4	-41.23	-937.1	-867.4	340.1	308.5	31.56	10.774		
7,100.0	7,020.1	7,114.6	7,027.5	21.8	18.5	-42.95	-935.2	-867.9	326.3	293.9	32.44	10.061		
7,200.0	7,118.8	7,214.1	7,127.0	22.2	18.6	-44.72	-932.8	-868.8	312.5	279.2	33.33	9.378		
7,300.0	7,217.5	7,313.1	7,225.9	22.5	18.7	-46.68	-930.4	-869.5	298.9	264.6	34.26	8.723		
7,400.0	7,316.2	7,411.9	7,324.7	22.8	18.8	-48.89	-927.8	-869.8	285.5	250.2	35.26	8.097		
7,500.0	7,414.9	7,510.7	7,423.4	23.2	18.9	-64.51	-925.1	-869.9	272.9	236.6	36.30	7.519		
7,549.1	7,463.6	7,559.3	7,472.1	23.3	19.0	-102.25	-923.8	-869.9	270.7	234.1	36.63	7.392 CC, ES, SF		
7,600.0	7,514.0	7,609.2	7,521.9	23.3	19.0	-133.57	-922.5	-869.9	273.1	236.4	36.72	7.438		
7,700.0	7,611.0	7,705.5	7,618.1	23.4	19.1	-159.78	-920.2	-869.5	291.6	255.5	36.15	8.067		
7,800.0	7,703.0	7,796.5	7,709.1	23.3	19.2	-170.11	-918.4	-869.0	327.6	293.0	34.58	9.474		
7,900.0	7,787.3	7,879.5	7,792.1	23.1	19.3	-175.76	-917.4	-868.8	379.8	347.7	32.14	11.818		
8,000.0	7,861.3	7,952.6	7,865.3	22.8	19.4	-179.63	-916.8	-868.7	446.3	417.2	29.07	15.355		
8,100.0	7,922.7	8,014.5	7,927.2	22.6	19.5	176.92	-916.3	-868.6	524.7	498.9	25.73	20.388		
8,200.0	7,969.6	8,062.1	7,974.7	22.3	19.5	172.56	-916.0	-868.6	612.4	589.7	22.74	26.933		
8,300.0	8,000.7	8,093.8	8,006.4	22.2	19.6	163.79	-915.8	-868.5	706.9	685.5	21.45	32.951		
8,400.0	8,015.1	8,108.8	8,021.4	22.1	19.6	128.13	-915.7	-868.5	805.4	777.3	28.14	28.620		
8,500.0	8,016.0	8,110.4	8,023.0	22.1	19.6	94.83	-915.7	-868.5	905.0	873.4	31.64	28.602		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 24-29 PD - SYNERGY - SURVEYS														Offset Site Error:	0.0 ft
Survey Program: 248-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	2.1	2.1	0.0	0.0	-150.18	-409.1	-234.4	471.5						
100.0	100.0	104.6	104.6	0.2	0.2	-150.16	-408.7	-234.5	471.2	470.9	0.32	1,450.036			
200.0	200.0	207.0	207.0	0.3	0.3	-150.09	-407.7	-234.6	470.4	469.7	0.67	702.928			
300.0	300.0	308.7	308.7	0.5	0.5	-150.08	-406.6	-233.9	469.1	468.1	1.02	460.102			
400.0	400.0	399.0	398.9	0.7	0.7	-23.36	-407.7	-230.5	467.6	466.2	1.36	344.547			
500.0	500.0	489.0	488.6	0.9	0.9	-24.33	-412.6	-225.3	467.1	465.4	1.72	271.970			
600.0	599.9	586.0	585.0	1.0	1.1	-25.90	-420.6	-217.2	466.6	464.5	2.13	219.071			
700.0	699.7	690.9	688.7	1.2	1.4	-28.11	-430.3	-205.2	464.6	462.0	2.61	178.270			
800.0	799.4	796.8	793.0	1.4	1.7	-30.83	-439.5	-189.8	460.0	456.9	3.12	147.234			
900.0	898.9	893.7	888.3	1.7	2.1	-33.72	-447.8	-173.8	454.0	450.4	3.65	124.356			
1,000.0	998.3	991.1	983.8	1.9	2.4	-36.93	-456.4	-156.9	448.0	443.9	4.19	106.970			
1,100.0	1,097.4	1,086.2	1,077.2	2.2	2.8	-40.20	-464.6	-140.9	442.1	437.3	4.73	93.541			
1,200.0	1,196.3	1,181.0	1,170.1	2.5	3.2	-43.75	-473.2	-124.4	436.8	431.5	5.31	82.321			
1,300.0	1,295.0	1,274.4	1,261.1	2.8	3.6	-47.77	-482.2	-105.3	432.9	427.0	5.92	73.068			
1,363.7	1,357.8	1,330.7	1,315.7	3.0	3.8	-50.34	-488.0	-92.8	432.0	425.7	6.31	68.438 CC, ES			
1,400.0	1,393.7	1,361.3	1,345.3	3.1	4.0	-51.75	-491.4	-85.9	432.4	425.8	6.53	66.240			
1,500.0	1,492.4	1,448.5	1,429.6	3.4	4.4	-55.73	-502.3	-66.4	436.3	429.2	7.12	61.313			
1,600.0	1,591.1	1,541.2	1,519.2	3.7	4.8	-59.80	-514.8	-46.1	443.9	436.2	7.69	57.691			
1,700.0	1,689.8	1,640.9	1,615.9	4.1	5.3	-63.87	-527.9	-25.6	453.3	445.1	8.25	54.919			
1,800.0	1,788.6	1,741.4	1,713.6	4.4	5.7	-67.75	-539.9	-5.8	463.6	454.8	8.79	52.762			
1,900.0	1,887.3	1,842.8	1,812.4	4.7	6.2	-71.54	-550.6	14.4	474.6	465.3	9.31	50.969			
2,000.0	1,986.0	1,931.0	1,898.2	5.0	6.6	-74.90	-559.0	33.3	487.2	477.4	9.79	49.744			
2,100.0	2,084.7	2,015.5	1,980.0	5.3	7.0	-78.00	-568.2	52.5	503.5	493.3	10.25	49.146			
2,200.0	2,183.4	2,109.2	2,070.4	5.7	7.4	-81.21	-579.6	74.1	522.9	512.2	10.69	48.924			
2,300.0	2,282.1	2,202.8	2,160.9	6.0	7.9	-84.22	-590.4	95.5	543.3	532.2	11.11	48.908 SF			
2,400.0	2,380.8	2,301.8	2,256.6	6.3	8.3	-87.13	-602.3	117.8	565.3	553.8	11.51	49.131			
2,500.0	2,479.5	2,392.3	2,344.4	6.6	8.8	-89.55	-612.7	137.2	587.5	575.6	11.90	49.388			
2,600.0	2,578.2	2,486.6	2,435.5	7.0	9.2	-92.01	-623.6	159.1	612.0	599.7	12.28	49.844			
2,700.0	2,676.9	2,586.1	2,531.8	7.3	9.7	-94.41	-634.3	181.4	636.4	623.8	12.64	50.339			
2,800.0	2,775.6	2,689.6	2,632.3	7.6	10.2	-96.64	-645.5	203.4	660.9	647.9	13.02	50.766			
2,900.0	2,874.3	2,800.8	2,740.8	8.0	10.6	-98.90	-655.5	225.9	684.3	670.9	13.38	51.147			
3,000.0	2,973.0	2,894.4	2,832.4	8.3	11.0	-100.59	-664.0	243.2	707.2	693.4	13.74	51.457			
3,100.0	3,071.8	2,967.0	2,903.2	8.6	11.4	-101.84	-671.3	257.6	732.2	718.1	14.10	51.929			
3,200.0	3,170.5	3,048.8	2,982.4	8.9	11.8	-103.19	-680.5	275.7	760.3	745.8	14.47	52.545			
3,300.0	3,269.2	3,142.2	3,072.6	9.3	12.2	-104.72	-690.6	297.5	789.6	774.8	14.83	53.234			
3,400.0	3,367.9	3,238.5	3,165.9	9.6	12.7	-106.01	-702.7	318.4	819.0	803.8	15.21	53.866			
3,500.0	3,466.6	3,324.9	3,249.6	9.9	13.1	-107.01	-714.6	336.5	849.0	833.4	15.59	54.467			
3,600.0	3,565.3	3,403.5	3,325.3	10.3	13.5	-107.93	-725.3	354.5	880.5	864.5	15.96	55.156			
3,700.0	3,664.0	3,485.6	3,404.0	10.6	13.9	-108.85	-737.0	374.6	914.0	897.7	16.35	55.916			
3,800.0	3,762.7	3,589.5	3,503.7	10.9	14.5	-109.98	-751.1	400.3	947.7	930.9	16.75	56.579			
3,900.0	3,861.4	3,686.3	3,596.9	11.3	15.0	-110.90	-764.6	422.8	980.4	963.3	17.15	57.155			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29HD (AL) - SYNERGY - NEVER DRILLED														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			
0.0	0.0	0.0	0.0	0.0	0.0	-140.83	-408.4	-332.8	526.9						
100.0	100.0	88.0	88.0	0.2	0.2	-140.83	-408.4	-332.8	526.8	526.5	0.31	1,724.595			
200.0	200.0	188.0	188.0	0.3	0.3	-140.83	-408.4	-332.8	526.8	526.1	0.65	804.874			
300.0	300.0	288.0	288.0	0.5	0.5	-140.83	-408.4	-332.8	526.8	525.8	1.00	524.918			
400.0	400.0	388.0	388.0	0.7	0.7	-13.65	-408.4	-332.8	525.9	524.6	1.35	388.855			
500.0	500.0	488.0	488.0	0.9	0.9	-13.73	-408.4	-332.8	523.4	521.7	1.70	307.636			
600.0	599.9	587.9	587.9	1.0	1.0	-13.85	-408.4	-332.8	519.2	517.1	2.05	253.242			
700.0	699.7	687.7	687.7	1.2	1.2	-14.03	-408.4	-332.8	513.2	510.8	2.40	213.958			
800.0	799.4	787.4	787.4	1.4	1.4	-14.26	-408.4	-332.8	505.6	502.9	2.75	184.024			
900.0	898.9	886.9	886.9	1.7	1.5	-14.56	-408.4	-332.8	496.3	493.2	3.10	160.272			
1,100.0	1,097.4	1,085.4	1,085.4	2.2	1.9	-15.37	-408.4	-332.8	472.8	469.0	3.80	124.478			
1,200.0	1,196.3	1,184.3	1,184.3	2.5	2.1	-15.89	-408.4	-332.8	458.5	454.4	4.15	110.453			
1,300.0	1,295.0	1,283.0	1,283.0	2.8	2.2	-16.47	-408.4	-332.8	443.2	438.7	4.51	98.237			
1,400.0	1,393.7	1,381.7	1,381.7	3.1	2.4	-17.08	-408.4	-332.8	427.8	422.9	4.88	87.755			
1,500.0	1,492.4	1,480.4	1,480.4	3.4	2.6	-17.73	-408.4	-332.8	412.5	407.3	5.24	78.691			
1,600.0	1,591.1	1,579.1	1,579.1	3.7	2.8	-18.43	-408.4	-332.8	397.3	391.6	5.61	70.778			
1,700.0	1,689.8	1,677.8	1,677.8	4.1	2.9	-19.19	-408.4	-332.8	382.1	376.1	5.99	63.814			
1,800.0	1,788.6	1,776.6	1,776.6	4.4	3.1	-20.01	-408.4	-332.8	366.9	360.6	6.37	57.638			
1,900.0	1,887.3	1,875.3	1,875.3	4.7	3.3	-20.90	-408.4	-332.8	351.9	345.2	6.75	52.127			
2,000.0	1,986.0	1,974.0	1,974.0	5.0	3.4	-21.87	-408.4	-332.8	337.0	329.8	7.14	47.182			
2,100.0	2,084.7	2,072.7	2,072.7	5.3	3.6	-22.93	-408.4	-332.8	322.1	314.6	7.54	42.721			
2,200.0	2,183.4	2,171.4	2,171.4	5.7	3.8	-24.10	-408.4	-332.8	307.4	299.4	7.95	38.681			
2,300.0	2,282.1	2,270.1	2,270.1	6.0	4.0	-25.37	-408.4	-332.8	292.8	284.4	8.36	35.008			
2,400.0	2,380.8	2,368.8	2,368.8	6.3	4.1	-26.78	-408.4	-332.8	278.4	269.6	8.79	31.659			
2,500.0	2,479.5	2,467.5	2,467.5	6.6	4.3	-28.35	-408.4	-332.8	264.1	254.9	9.24	28.597			
2,600.0	2,578.2	2,566.2	2,566.2	7.0	4.5	-30.08	-408.4	-332.8	250.1	240.4	9.70	25.793			
2,700.0	2,676.9	2,664.9	2,664.9	7.3	4.7	-32.02	-408.4	-332.8	236.3	226.1	10.18	23.222			
2,800.0	2,775.6	2,763.6	2,763.6	7.6	4.8	-34.20	-408.4	-332.8	222.8	212.2	10.68	20.865			
2,900.0	2,874.3	2,862.3	2,862.3	8.0	5.0	-36.65	-408.4	-332.8	209.7	198.5	11.21	18.707			
3,000.0	2,973.0	2,961.0	2,961.0	8.3	5.2	-39.42	-408.4	-332.8	197.0	185.3	11.77	16.736			
3,100.0	3,071.8	3,059.8	3,059.8	8.6	5.3	-42.56	-408.4	-332.8	184.9	172.5	12.37	14.944			
3,200.0	3,170.5	3,158.5	3,158.5	8.9	5.5	-46.12	-408.4	-332.8	173.3	160.3	13.01	13.325			
3,300.0	3,269.2	3,257.2	3,257.2	9.3	5.7	-50.16	-408.4	-332.8	162.6	148.9	13.68	11.879			
3,400.0	3,367.9	3,355.9	3,355.9	9.6	5.9	-54.74	-408.4	-332.8	152.7	138.3	14.40	10.605			
3,500.0	3,466.6	3,454.6	3,454.6	9.9	6.0	-59.91	-408.4	-332.8	144.0	128.8	15.14	9.507			
3,600.0	3,565.3	3,553.3	3,553.3	10.3	6.2	-65.67	-408.4	-332.8	136.5	120.6	15.90	8.588			
3,700.0	3,664.0	3,652.0	3,652.0	10.6	6.4	-72.01	-408.4	-332.8	130.7	114.0	16.64	7.852			
3,800.0	3,762.7	3,750.7	3,750.7	10.9	6.5	-78.84	-408.4	-332.8	126.6	109.3	17.34	7.300			
3,900.0	3,861.4	3,849.4	3,849.4	11.3	6.7	-86.00	-408.4	-332.8	124.5	106.5	17.96	6.930			
3,954.8	3,915.5	3,903.5	3,903.5	11.4	6.8	-90.00	-408.4	-332.8	124.1	105.9	18.25	6.801 CC			
4,000.0	3,960.1	3,948.1	3,948.1	11.6	6.9	-93.29	-408.4	-332.8	124.4	105.9	18.47	6.734 ES			
4,100.0	4,058.8	4,046.8	4,046.8	11.9	7.1	-100.48	-408.4	-332.8	126.3	107.5	18.85	6.699 SF			
4,200.0	4,157.5	4,145.5	4,145.5	12.2	7.2	-107.35	-408.4	-332.8	130.2	111.1	19.12	6.809			
4,300.0	4,256.2	4,244.2	4,244.2	12.6	7.4	-113.74	-408.4	-332.8	135.9	116.6	19.30	7.041			
4,400.0	4,355.0	4,343.0	4,343.0	12.9	7.6	-119.56	-408.4	-332.8	143.2	123.8	19.41	7.375			
4,500.0	4,453.7	4,441.7	4,441.7	13.2	7.8	-124.78	-408.4	-332.8	151.8	132.3	19.49	7.788			
4,600.0	4,552.4	4,540.4	4,540.4	13.6	7.9	-129.42	-408.4	-332.8	161.6	142.0	19.55	8.262			
4,700.0	4,651.1	4,639.1	4,639.1	13.9	8.1	-133.51	-408.4	-332.8	172.3	152.6	19.62	8.780			
4,800.0	4,749.8	4,737.8	4,737.8	14.2	8.3	-137.12	-408.4	-332.8	183.7	164.0	19.70	9.328			
4,900.0	4,848.5	4,836.5	4,836.5	14.6	8.4	-140.29	-408.4	-332.8	195.8	176.0	19.79	9.895			
5,000.0	4,947.2	4,935.2	4,935.2	14.9	8.6	-143.10	-408.4	-332.8	208.5	188.6	19.91	10.472			
5,100.0	5,045.9	5,033.9	5,033.9	15.2	8.8	-145.58	-408.4	-332.8	221.6	201.5	20.05	11.053			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29HD (AL) - SYNERGY - NEVER DRILLED											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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses		Total Uncertainty Axis	Separation Factor
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)			
5,200.0	5,144.6	5,132.6	5,132.6	15.6	9.0	-147.78	-408.4	-332.8	235.0	214.8	20.20	11.631	
5,300.0	5,243.3	5,231.3	5,231.3	15.9	9.1	-149.74	-408.4	-332.8	248.8	228.4	20.38	12.205	
5,400.0	5,342.0	5,330.0	5,330.0	16.2	9.3	-151.49	-408.4	-332.8	262.8	242.2	20.58	12.771	
5,500.0	5,440.7	5,428.7	5,428.7	16.5	9.5	-153.07	-408.4	-332.8	277.0	256.2	20.79	13.326	
5,600.0	5,539.4	5,527.4	5,527.4	16.9	9.6	-154.50	-408.4	-332.8	291.4	270.4	21.01	13.870	
5,700.0	5,638.2	5,626.2	5,626.2	17.2	9.8	-155.79	-408.4	-332.8	306.0	284.7	21.24	14.402	
5,800.0	5,736.9	5,724.9	5,724.9	17.5	10.0	-156.96	-408.4	-332.8	320.7	299.2	21.49	14.922	
5,900.0	5,835.6	5,823.6	5,823.6	17.9	10.2	-158.03	-408.4	-332.8	335.5	313.8	21.75	15.428	
6,000.0	5,934.3	5,922.3	5,922.3	18.2	10.3	-159.01	-408.4	-332.8	350.5	328.4	22.01	15.921	
6,100.0	6,033.0	6,021.0	6,021.0	18.5	10.5	-159.90	-408.4	-332.8	365.5	343.2	22.28	16.401	
6,200.0	6,131.7	6,119.7	6,119.7	18.9	10.7	-160.73	-408.4	-332.8	380.6	358.0	22.56	16.868	
6,300.0	6,230.4	6,218.4	6,218.4	19.2	10.9	-161.50	-408.4	-332.8	395.8	372.9	22.85	17.322	
6,400.0	6,329.1	6,317.1	6,317.1	19.5	11.0	-162.20	-408.4	-332.8	411.0	387.9	23.14	17.764	
6,500.0	6,427.8	6,415.8	6,415.8	19.9	11.2	-162.86	-408.4	-332.8	426.3	402.9	23.43	18.194	
6,600.0	6,526.5	6,514.5	6,514.5	20.2	11.4	-163.47	-408.4	-332.8	441.7	418.0	23.73	18.612	
6,700.0	6,625.2	6,613.2	6,613.2	20.5	11.5	-164.04	-408.4	-332.8	457.1	433.1	24.03	19.018	
6,800.0	6,723.9	6,711.9	6,711.9	20.9	11.7	-164.58	-408.4	-332.8	472.5	448.2	24.34	19.414	
6,900.0	6,822.6	6,810.6	6,810.6	21.2	11.9	-165.08	-408.4	-332.8	488.0	463.4	24.65	19.799	
7,000.0	6,921.4	6,909.4	6,909.4	21.5	12.1	-165.55	-408.4	-332.8	503.5	478.6	24.96	20.173	
7,100.0	7,020.1	7,008.1	7,008.1	21.8	12.2	-165.99	-408.4	-332.8	519.1	493.8	25.27	20.537	
7,200.0	7,118.8	7,106.8	7,106.8	22.2	12.4	-166.40	-408.4	-332.8	534.6	509.1	25.59	20.892	
7,300.0	7,217.5	7,205.5	7,205.5	22.5	12.6	-166.80	-408.4	-332.8	550.2	524.3	25.91	21.238	
7,400.0	7,316.2	7,304.2	7,304.2	22.8	12.7	-167.17	-408.4	-332.8	565.9	539.6	26.23	21.574	
7,500.0	7,414.9	7,402.9	7,402.9	23.2	12.9	179.05	-408.4	-332.8	581.3	554.8	26.54	21.900	
7,600.0	7,514.0	7,502.0	7,502.0	23.3	13.1	112.50	-408.4	-332.8	591.6	564.7	26.89	21.999	
7,700.0	7,611.0	7,599.0	7,599.0	23.4	13.3	90.71	-408.4	-332.8	595.0	567.7	27.33	21.775	
7,800.0	7,703.0	7,691.0	7,691.0	23.3	13.4	86.17	-408.4	-332.8	593.2	565.3	27.86	21.290	
7,900.0	7,787.3	7,775.3	7,775.3	23.1	13.6	87.09	-408.4	-332.8	589.2	560.7	28.46	20.704	
7,999.4	7,860.8	7,848.8	7,848.8	22.8	13.7	90.00	-408.4	-332.8	586.9	558.0	28.93	20.291	
8,000.0	7,861.3	7,849.3	7,849.3	22.8	13.7	90.02	-408.4	-332.8	586.9	558.0	28.93	20.289	
8,100.0	7,922.7	7,910.7	7,910.7	22.6	13.8	93.07	-408.4	-332.8	590.7	561.6	29.09	20.305	
8,200.0	7,969.6	7,957.6	7,957.6	22.3	13.9	94.91	-408.4	-332.8	604.5	575.5	28.97	20.864	
8,300.0	8,000.7	7,988.7	7,988.7	22.2	13.9	94.60	-408.4	-332.8	630.5	601.7	28.78	21.903	
8,400.0	8,015.1	8,003.1	8,003.1	22.1	14.0	91.61	-408.4	-332.8	668.8	640.1	28.71	23.298	
8,500.0	8,016.0	8,004.0	8,004.0	22.1	14.0	90.00	-408.4	-332.8	718.0	689.2	28.77	24.957	
8,600.0	8,016.0	8,004.0	8,004.0	22.3	14.0	90.00	-408.4	-332.8	776.9	747.8	29.05	26.747	
8,700.0	8,016.0	8,004.0	8,004.0	22.6	14.0	90.00	-408.4	-332.8	843.5	814.0	29.52	28.579	
8,800.0	8,016.0	8,004.0	8,004.0	23.1	14.0	90.00	-408.4	-332.8	916.3	886.1	30.16	30.377	
8,900.0	8,016.0	8,004.0	8,004.0	23.6	14.0	90.00	-408.4	-332.8	993.8	962.8	30.97	32.090	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29LD (AL) - SYNERGY - NEVER DRILLED													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-146.28	-408.4	-272.5	491.1					
100.0	100.0	88.0	88.0	0.2	0.2	-146.28	-408.4	-272.5	491.0	490.7	0.31	1,607.354		
200.0	200.0	188.0	188.0	0.3	0.3	-146.28	-408.4	-272.5	491.0	490.3	0.65	750.158		
300.0	300.0	288.0	288.0	0.5	0.5	-146.28	-408.4	-272.5	491.0	490.0	1.00	489.233		
400.0	400.0	388.0	388.0	0.7	0.7	-19.12	-408.4	-272.5	490.2	488.8	1.35	362.383		
500.0	500.0	488.0	488.0	0.9	0.9	-19.23	-408.4	-272.5	487.7	486.0	1.70	286.594		
600.0	599.9	587.9	587.9	1.0	1.0	-19.42	-408.4	-272.5	483.6	481.5	2.05	235.769		
700.0	699.7	687.7	687.7	1.2	1.2	-19.68	-408.4	-272.5	477.8	475.4	2.40	199.001		
800.0	799.4	787.4	787.4	1.4	1.4	-20.03	-408.4	-272.5	470.4	467.7	2.75	170.928		
900.0	898.9	886.9	886.9	1.7	1.5	-20.46	-408.4	-272.5	461.4	458.3	3.11	148.604		
1,100.0	1,097.4	1,085.4	1,085.4	2.2	1.9	-21.66	-408.4	-272.5	438.7	434.8	3.82	114.836		
1,200.0	1,196.3	1,184.3	1,184.3	2.5	2.1	-22.45	-408.4	-272.5	424.9	420.8	4.18	101.550		
1,300.0	1,295.0	1,283.0	1,283.0	2.8	2.2	-23.31	-408.4	-272.5	410.2	405.6	4.56	89.988		
1,400.0	1,393.7	1,381.7	1,381.7	3.1	2.4	-24.23	-408.4	-272.5	395.5	390.6	4.94	80.084		
1,500.0	1,492.4	1,480.4	1,480.4	3.4	2.6	-25.22	-408.4	-272.5	380.9	375.6	5.32	71.535		
1,600.0	1,591.1	1,579.1	1,579.1	3.7	2.8	-26.28	-408.4	-272.5	366.4	360.7	5.72	64.088		
1,700.0	1,689.8	1,677.8	1,677.8	4.1	2.9	-27.43	-408.4	-272.5	352.1	346.0	6.12	57.549		
1,800.0	1,788.6	1,776.6	1,776.6	4.4	3.1	-28.68	-408.4	-272.5	337.9	331.4	6.53	51.770		
1,900.0	1,887.3	1,875.3	1,875.3	4.7	3.3	-30.04	-408.4	-272.5	323.9	317.0	6.95	46.631		
2,000.0	1,986.0	1,974.0	1,974.0	5.0	3.4	-31.51	-408.4	-272.5	310.1	302.7	7.38	42.039		
2,100.0	2,084.7	2,072.7	2,072.7	5.3	3.6	-33.13	-408.4	-272.5	296.5	288.7	7.82	37.920		
2,200.0	2,183.4	2,171.4	2,171.4	5.7	3.8	-34.89	-408.4	-272.5	283.2	274.9	8.28	34.213		
2,300.0	2,282.1	2,270.1	2,270.1	6.0	4.0	-36.83	-408.4	-272.5	270.1	261.4	8.75	30.870		
2,400.0	2,380.8	2,368.8	2,368.8	6.3	4.1	-38.95	-408.4	-272.5	257.4	248.2	9.24	27.851		
2,500.0	2,479.5	2,467.5	2,467.5	6.6	4.3	-41.30	-408.4	-272.5	245.1	235.3	9.75	25.124		
2,600.0	2,578.2	2,566.2	2,566.2	7.0	4.5	-43.88	-408.4	-272.5	233.2	222.9	10.29	22.664		
2,700.0	2,676.9	2,664.9	2,664.9	7.3	4.7	-46.73	-408.4	-272.5	221.9	211.0	10.85	20.449		
2,800.0	2,775.6	2,763.6	2,763.6	7.6	4.8	-49.87	-408.4	-272.5	211.1	199.7	11.43	18.465		
2,900.0	2,874.3	2,862.3	2,862.3	8.0	5.0	-53.34	-408.4	-272.5	201.1	189.0	12.04	16.698		
3,000.0	2,973.0	2,961.0	2,961.0	8.3	5.2	-57.14	-408.4	-272.5	191.9	179.2	12.67	15.138		
3,100.0	3,071.8	3,059.8	3,059.8	8.6	5.3	-61.31	-408.4	-272.5	183.6	170.3	13.32	13.779		
3,200.0	3,170.5	3,158.5	3,158.5	8.9	5.5	-65.83	-408.4	-272.5	176.4	162.4	13.98	12.613		
3,300.0	3,269.2	3,257.2	3,257.2	9.3	5.7	-70.70	-408.4	-272.5	170.4	155.7	14.64	11.636		
3,400.0	3,367.9	3,355.9	3,355.9	9.6	5.9	-75.87	-408.4	-272.5	165.7	150.4	15.28	10.841		
3,500.0	3,466.6	3,454.6	3,454.6	9.9	6.0	-81.29	-408.4	-272.5	162.5	146.6	15.90	10.221		
3,600.0	3,565.3	3,553.3	3,553.3	10.3	6.2	-86.87	-408.4	-272.5	160.8	144.3	16.46	9.769		
3,655.5	3,620.1	3,608.1	3,608.1	10.5	6.3	-90.00	-408.4	-272.5	160.5	143.8	16.75	9.586 CC		
3,700.0	3,664.0	3,652.0	3,652.0	10.6	6.4	-92.51	-408.4	-272.5	160.7	143.7	16.97	9.472 ES		
3,800.0	3,762.7	3,750.7	3,750.7	10.9	6.5	-98.10	-408.4	-272.5	162.2	144.8	17.40	9.320		
3,900.0	3,861.4	3,849.4	3,849.4	11.3	6.7	-103.54	-408.4	-272.5	165.3	147.5	17.78	9.297 SF		
4,000.0	3,960.1	3,948.1	3,948.1	11.6	6.9	-108.75	-408.4	-272.5	169.8	151.7	18.08	9.388		
4,100.0	4,058.8	4,046.8	4,046.8	11.9	7.1	-113.65	-408.4	-272.5	175.6	157.3	18.34	9.576		
4,200.0	4,157.5	4,145.5	4,145.5	12.2	7.2	-118.21	-408.4	-272.5	182.7	164.2	18.56	9.847		
4,300.0	4,256.2	4,244.2	4,244.2	12.6	7.4	-122.41	-408.4	-272.5	190.9	172.2	18.74	10.185		
4,400.0	4,355.0	4,343.0	4,343.0	12.9	7.6	-126.26	-408.4	-272.5	200.0	181.1	18.91	10.576		
4,500.0	4,453.7	4,441.7	4,441.7	13.2	7.8	-129.76	-408.4	-272.5	210.0	190.9	19.07	11.009		
4,600.0	4,552.4	4,540.4	4,540.4	13.6	7.9	-132.94	-408.4	-272.5	220.6	201.4	19.23	11.473		
4,700.0	4,651.1	4,639.1	4,639.1	13.9	8.1	-135.82	-408.4	-272.5	231.9	212.5	19.39	11.959		
4,800.0	4,749.8	4,737.8	4,737.8	14.2	8.3	-138.43	-408.4	-272.5	243.7	224.2	19.56	12.461		
4,900.0	4,848.5	4,836.5	4,836.5	14.6	8.4	-140.80	-408.4	-272.5	256.0	236.3	19.74	12.971		
5,000.0	4,947.2	4,935.2	4,935.2	14.9	8.6	-142.95	-408.4	-272.5	268.7	248.8	19.92	13.486		
5,100.0	5,045.9	5,033.9	5,033.9	15.2	8.8	-144.91	-408.4	-272.5	281.7	261.6	20.12	14.001		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29LD (AL) - SYNERGY - NEVER DRILLED													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		
5,200.0	5,144.6	5,132.6	5,132.6	15.6	9.0	-146.69	-408.4	-272.5	295.0	274.7	20.33	14.514		
5,300.0	5,243.3	5,231.3	5,231.3	15.9	9.1	-148.32	-408.4	-272.5	308.6	288.0	20.54	15.021		
5,400.0	5,342.0	5,330.0	5,330.0	16.2	9.3	-149.81	-408.4	-272.5	322.4	301.6	20.77	15.522		
5,500.0	5,440.7	5,428.7	5,428.7	16.5	9.5	-151.18	-408.4	-272.5	336.4	315.4	21.00	16.014		
5,600.0	5,539.4	5,527.4	5,527.4	16.9	9.6	-152.44	-408.4	-272.5	350.5	329.3	21.25	16.498		
5,700.0	5,638.2	5,626.2	5,626.2	17.2	9.8	-153.60	-408.4	-272.5	364.8	343.3	21.50	16.972		
5,800.0	5,736.9	5,724.9	5,724.9	17.5	10.0	-154.67	-408.4	-272.5	379.3	357.5	21.76	17.435		
5,900.0	5,835.6	5,823.6	5,823.6	17.9	10.2	-155.67	-408.4	-272.5	393.9	371.9	22.02	17.888		
6,000.0	5,934.3	5,922.3	5,922.3	18.2	10.3	-156.59	-408.4	-272.5	408.6	386.3	22.29	18.330		
6,100.0	6,033.0	6,021.0	6,021.0	18.5	10.5	-157.45	-408.4	-272.5	423.3	400.8	22.57	18.761		
6,200.0	6,131.7	6,119.7	6,119.7	18.9	10.7	-158.25	-408.4	-272.5	438.2	415.4	22.85	19.181		
6,300.0	6,230.4	6,218.4	6,218.4	19.2	10.9	-159.00	-408.4	-272.5	453.2	430.0	23.13	19.591		
6,400.0	6,329.1	6,317.1	6,317.1	19.5	11.0	-159.70	-408.4	-272.5	468.2	444.8	23.42	19.990		
6,500.0	6,427.8	6,415.8	6,415.8	19.9	11.2	-160.36	-408.4	-272.5	483.3	459.6	23.71	20.379		
6,600.0	6,526.5	6,514.5	6,514.5	20.2	11.4	-160.98	-408.4	-272.5	498.4	474.4	24.01	20.758		
6,700.0	6,625.2	6,613.2	6,613.2	20.5	11.5	-161.56	-408.4	-272.5	513.6	489.3	24.31	21.128		
6,800.0	6,723.9	6,711.9	6,711.9	20.9	11.7	-162.11	-408.4	-272.5	528.9	504.2	24.61	21.487		
6,900.0	6,822.6	6,810.6	6,810.6	21.2	11.9	-162.63	-408.4	-272.5	544.1	519.2	24.92	21.838		
7,000.0	6,921.4	6,909.4	6,909.4	21.5	12.1	-163.12	-408.4	-272.5	559.5	534.2	25.23	22.179		
7,100.0	7,020.1	7,008.1	7,008.1	21.8	12.2	-163.58	-408.4	-272.5	574.8	549.3	25.54	22.511		
7,200.0	7,118.8	7,106.8	7,106.8	22.2	12.4	-164.02	-408.4	-272.5	590.2	564.4	25.85	22.835		
7,300.0	7,217.5	7,205.5	7,205.5	22.5	12.6	-164.44	-408.4	-272.5	605.7	579.5	26.16	23.151		
7,400.0	7,316.2	7,304.2	7,304.2	22.8	12.7	-164.83	-408.4	-272.5	621.2	594.7	26.48	23.459		
7,500.0	7,414.9	7,402.9	7,402.9	23.2	12.9	-178.65	-408.4	-272.5	636.5	609.7	26.78	23.765		
7,600.0	7,514.0	7,502.0	7,502.0	23.3	13.1	114.65	-408.4	-272.5	647.1	620.0	27.10	23.873		
7,700.0	7,611.0	7,599.0	7,599.0	23.4	13.3	92.58	-408.4	-272.5	651.3	623.8	27.52	23.662		
7,800.0	7,703.0	7,691.0	7,691.0	23.3	13.4	87.63	-408.4	-272.5	650.7	622.7	28.03	23.213		
7,900.0	7,787.3	7,775.3	7,775.3	23.1	13.6	88.04	-408.4	-272.5	648.0	619.5	28.57	22.685		
7,984.5	7,850.6	7,838.6	7,838.6	22.9	13.7	90.00	-408.4	-272.5	646.7	617.8	28.92	22.363		
8,000.0	7,861.3	7,849.3	7,849.3	22.8	13.7	90.42	-408.4	-272.5	646.8	617.8	28.97	22.330		
8,100.0	7,922.7	7,910.7	7,910.7	22.6	13.8	93.00	-408.4	-272.5	650.9	621.8	29.09	22.378		
8,200.0	7,969.6	7,957.6	7,957.6	22.3	13.9	94.55	-408.4	-272.5	663.9	634.9	28.96	22.924		
8,300.0	8,000.7	7,988.7	7,988.7	22.2	13.9	94.20	-408.4	-272.5	687.9	659.1	28.78	23.903		
8,400.0	8,015.1	8,003.1	8,003.1	22.1	14.0	91.46	-408.4	-272.5	723.3	694.6	28.70	25.198		
8,500.0	8,016.0	8,004.0	8,004.0	22.1	14.0	90.00	-408.4	-272.5	768.9	740.2	28.77	26.728		
8,600.0	8,016.0	8,004.0	8,004.0	22.3	14.0	90.00	-408.4	-272.5	824.1	795.1	29.05	28.374		
8,700.0	8,016.0	8,004.0	8,004.0	22.6	14.0	90.00	-408.4	-272.5	887.2	857.7	29.52	30.059		
8,800.0	8,016.0	8,004.0	8,004.0	23.1	14.0	90.00	-408.4	-272.5	956.6	926.4	30.16	31.713		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29QD (AL) - SYNERGY - NEVER DRILLED														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			
0.0	0.0	0.0	0.0	0.0	0.0	-150.34	-408.7	-232.8	470.5						
100.0	100.0	89.0	89.0	0.2	0.2	-150.34	-408.7	-232.8	470.3	470.0	0.31	1,531.048			
200.0	200.0	189.0	189.0	0.3	0.3	-150.34	-408.7	-232.8	470.3	469.7	0.66	716.712			
300.0	300.0	279.0	279.0	0.5	0.5	-150.42	-409.8	-232.6	471.3	470.3	0.99	476.982			
400.0	400.0	367.6	367.5	0.7	0.7	-23.54	-413.5	-231.9	473.8	472.5	1.32	357.910			
500.0	500.0	457.8	457.4	0.9	0.8	-24.15	-420.1	-230.8	477.2	475.5	1.67	286.247			
600.0	599.9	572.7	572.1	1.0	1.1	-24.95	-427.4	-229.5	478.3	476.2	2.05	233.191			
700.0	699.7	687.7	687.1	1.2	1.3	-25.53	-430.1	-229.0	474.7	472.2	2.43	195.578			
800.0	799.4	790.5	789.9	1.4	1.4	-25.96	-429.8	-229.1	467.3	464.6	2.78	167.919			
900.0	898.9	890.1	889.4	1.7	1.6	-26.50	-429.4	-229.1	458.4	455.3	3.14	146.085			
1,000.0	998.3	989.4	988.8	1.9	1.8	-27.16	-429.0	-229.2	448.0	444.5	3.50	128.057			
1,100.0	1,097.4	1,088.5	1,087.9	2.2	1.9	-27.96	-428.6	-229.3	436.0	432.2	3.87	112.807			
1,200.0	1,196.3	1,187.4	1,186.7	2.5	2.1	-28.93	-428.2	-229.3	422.7	418.4	4.24	99.642			
1,300.0	1,295.0	1,286.1	1,285.4	2.8	2.3	-30.00	-427.8	-229.4	408.4	403.7	4.63	88.204			
1,400.0	1,393.7	1,384.7	1,384.1	3.1	2.4	-31.13	-427.4	-229.5	394.2	389.1	5.03	78.417			
1,500.0	1,492.4	1,483.4	1,482.8	3.4	2.6	-32.34	-427.0	-229.5	380.1	374.7	5.43	69.983			
1,600.0	1,591.1	1,582.1	1,581.5	3.7	2.8	-33.64	-426.6	-229.6	366.3	360.5	5.85	62.653			
1,700.0	1,689.8	1,680.8	1,680.1	4.1	2.9	-35.05	-426.2	-229.7	352.7	346.4	6.27	56.236			
1,800.0	1,788.6	1,779.5	1,778.8	4.4	3.1	-36.56	-425.8	-229.8	339.2	332.5	6.71	50.583			
1,900.0	1,887.3	1,878.1	1,877.5	4.7	3.3	-38.20	-425.4	-229.8	326.1	318.9	7.15	45.578			
2,000.0	1,986.0	1,976.8	1,976.2	5.0	3.5	-39.97	-425.0	-229.9	313.2	305.6	7.61	41.128			
2,100.0	2,084.7	2,075.5	2,074.8	5.3	3.6	-41.89	-424.6	-230.0	300.6	292.5	8.09	37.160			
2,200.0	2,183.4	2,174.2	2,173.5	5.7	3.8	-43.98	-424.2	-230.0	288.4	279.9	8.58	33.613			
2,300.0	2,282.1	2,272.8	2,272.2	6.0	4.0	-46.24	-423.8	-230.1	276.7	267.6	9.09	30.439			
2,400.0	2,380.8	2,371.5	2,370.9	6.3	4.1	-48.69	-423.4	-230.2	265.4	255.7	9.61	27.599			
2,500.0	2,479.5	2,470.2	2,469.5	6.6	4.3	-51.36	-423.0	-230.3	254.6	244.4	10.16	25.061			
2,600.0	2,578.2	2,568.9	2,568.2	7.0	4.5	-54.25	-422.6	-230.3	244.4	233.7	10.72	22.798			
2,700.0	2,676.9	2,667.5	2,666.9	7.3	4.7	-57.38	-422.2	-230.4	234.9	223.6	11.30	20.790			
2,800.0	2,775.6	2,766.2	2,765.6	7.6	4.8	-60.76	-421.8	-230.5	226.2	214.3	11.89	19.018			
2,900.0	2,874.3	2,864.9	2,864.2	8.0	5.0	-64.39	-421.4	-230.5	218.3	205.8	12.50	17.467			
3,000.0	2,973.0	2,963.6	2,962.9	8.3	5.2	-68.27	-421.0	-230.6	211.4	198.3	13.11	16.125			
3,100.0	3,071.8	3,062.2	3,061.6	8.6	5.3	-72.38	-420.6	-230.7	205.5	191.8	13.72	14.980			
3,200.0	3,170.5	3,160.9	3,160.3	8.9	5.5	-76.71	-420.2	-230.8	200.8	186.4	14.32	14.021			
3,300.0	3,269.2	3,259.6	3,258.9	9.3	5.7	-81.21	-419.8	-230.8	197.2	182.3	14.90	13.238			
3,400.0	3,367.9	3,358.3	3,357.6	9.6	5.9	-85.85	-419.4	-230.9	195.0	179.6	15.45	12.619			
3,500.0	3,466.6	3,457.0	3,456.3	9.9	6.0	-90.55	-419.0	-231.0	194.1	178.2	15.97	12.155			
3,515.7	3,482.1	3,472.5	3,471.8	10.0	6.1	-91.30	-418.9	-231.0	194.1	178.1	16.05	12.095 CC, ES			
3,600.0	3,565.3	3,555.6	3,555.0	10.3	6.2	-95.27	-418.6	-231.0	194.6	178.2	16.45	11.832			
3,700.0	3,664.0	3,654.3	3,653.6	10.6	6.4	-99.93	-418.2	-231.1	196.4	179.5	16.88	11.639			
3,800.0	3,762.7	3,753.0	3,752.3	10.9	6.6	-104.48	-417.8	-231.2	199.5	182.3	17.26	11.562 SF			
3,900.0	3,861.4	3,851.7	3,851.0	11.3	6.7	-108.87	-417.4	-231.2	203.9	186.3	17.59	11.588			
4,000.0	3,960.1	3,950.3	3,949.7	11.6	6.9	-113.06	-417.0	-231.3	209.4	191.5	17.89	11.703			
4,100.0	4,058.8	4,049.0	4,048.4	11.9	7.1	-117.01	-416.6	-231.4	216.0	197.8	18.16	11.896			
4,200.0	4,157.5	4,147.7	4,147.0	12.2	7.2	-120.72	-416.2	-231.5	223.6	205.2	18.40	12.153			
4,300.0	4,256.2	4,246.4	4,245.7	12.6	7.4	-124.18	-415.8	-231.5	232.1	213.4	18.62	12.464			
4,400.0	4,355.0	4,345.0	4,344.4	12.9	7.6	-127.38	-415.4	-231.6	241.3	222.5	18.83	12.819			
4,500.0	4,453.7	4,443.7	4,443.1	13.2	7.8	-130.35	-415.0	-231.7	251.3	232.3	19.03	13.209			
4,600.0	4,552.4	4,542.4	4,541.7	13.6	7.9	-133.08	-414.6	-231.7	261.9	242.7	19.22	13.625			
4,700.0	4,651.1	4,641.1	4,640.4	13.9	8.1	-135.60	-414.2	-231.8	273.1	253.6	19.42	14.062			
4,800.0	4,749.8	4,739.8	4,739.1	14.2	8.3	-137.92	-413.8	-231.9	284.7	265.1	19.62	14.513			
4,900.0	4,848.5	4,838.4	4,837.8	14.6	8.4	-140.06	-413.4	-232.0	296.8	276.9	19.82	14.973			
5,000.0	4,947.2	4,937.1	4,936.4	14.9	8.6	-142.03	-413.0	-232.0	309.2	289.2	20.03	15.439			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29QD (AL) - SYNERGY - NEVER DRILLED													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		
5,100.0	5,045.9	5,035.8	5,035.1	15.2	8.8	-143.85	-412.6	-232.1	322.0	301.7	20.24	15.907		
5,200.0	5,144.6	5,134.5	5,133.8	15.6	9.0	-145.53	-412.2	-232.2	335.1	314.6	20.46	16.375		
5,300.0	5,243.3	5,233.1	5,232.5	15.9	9.1	-147.08	-411.8	-232.2	348.4	327.7	20.69	16.840		
5,400.0	5,342.0	5,331.8	5,331.1	16.2	9.3	-148.52	-411.4	-232.3	362.0	341.1	20.92	17.301		
5,500.0	5,440.7	5,430.5	5,429.8	16.5	9.5	-149.85	-411.0	-232.4	375.8	354.6	21.16	17.756		
5,600.0	5,539.4	5,529.2	5,528.5	16.9	9.7	-151.09	-410.6	-232.4	389.7	368.3	21.41	18.205		
5,700.0	5,638.2	5,627.8	5,627.2	17.2	9.8	-152.25	-410.2	-232.5	403.9	382.2	21.66	18.645		
5,800.0	5,736.9	5,726.5	5,725.8	17.5	10.0	-153.32	-409.8	-232.6	418.2	396.3	21.92	19.078		
5,900.0	5,835.6	5,825.2	5,824.5	17.9	10.2	-154.33	-409.4	-232.7	432.6	410.4	22.18	19.501		
6,000.0	5,934.3	5,923.9	5,923.2	18.2	10.3	-155.27	-409.0	-232.7	447.2	424.7	22.45	19.916		
6,100.0	6,033.0	6,022.7	6,022.0	18.5	10.5	-156.13	-408.7	-232.8	461.8	439.1	22.73	20.320		
6,200.0	6,131.7	6,121.4	6,120.7	18.9	10.7	-156.91	-408.7	-232.8	476.5	453.5	23.01	20.710		
6,300.0	6,230.4	6,220.1	6,219.4	19.2	10.9	-157.64	-408.7	-232.8	491.3	468.0	23.30	21.090		
6,400.0	6,329.1	6,318.8	6,318.1	19.5	11.0	-158.33	-408.7	-232.8	506.2	482.6	23.59	21.461		
6,500.0	6,427.8	6,417.5	6,416.8	19.9	11.2	-158.98	-408.7	-232.8	521.2	497.3	23.88	21.823		
6,600.0	6,526.5	6,516.2	6,515.5	20.2	11.4	-159.59	-408.7	-232.8	536.2	512.0	24.18	22.176		
6,700.0	6,625.2	6,614.9	6,614.2	20.5	11.5	-160.17	-408.7	-232.8	551.3	526.8	24.48	22.520		
6,800.0	6,723.9	6,713.6	6,712.9	20.9	11.7	-160.72	-408.7	-232.8	566.4	541.6	24.78	22.855		
6,900.0	6,822.6	6,812.3	6,811.6	21.2	11.9	-161.24	-408.7	-232.8	581.6	556.5	25.09	23.183		
7,000.0	6,921.4	6,911.0	6,910.4	21.5	12.1	-161.74	-408.7	-232.8	596.8	571.4	25.39	23.502		
7,100.0	7,020.1	7,009.7	7,009.1	21.8	12.2	-162.21	-408.7	-232.8	612.0	586.3	25.70	23.813		
7,200.0	7,118.8	7,108.5	7,107.8	22.2	12.4	-162.65	-408.7	-232.8	627.3	601.3	26.01	24.116		
7,300.0	7,217.5	7,207.2	7,206.5	22.5	12.6	-163.08	-408.7	-232.8	642.7	616.3	26.33	24.412		
7,400.0	7,316.2	7,305.9	7,305.2	22.8	12.8	-163.49	-408.7	-232.8	658.0	631.4	26.64	24.701		
7,500.0	7,414.9	7,404.6	7,403.9	23.2	12.9	-177.31	-408.7	-232.8	673.2	646.3	26.94	24.993		
7,600.0	7,514.0	7,503.6	7,503.0	23.3	13.1	115.91	-408.7	-232.8	684.0	656.8	27.24	25.107		
7,700.0	7,611.0	7,600.6	7,600.0	23.4	13.3	93.67	-408.7	-232.8	688.7	661.1	27.65	24.908		
7,800.0	7,703.0	7,692.7	7,692.0	23.3	13.4	88.48	-408.7	-232.8	688.9	660.7	28.14	24.483		
7,900.0	7,787.3	7,777.0	7,776.3	23.1	13.6	88.59	-408.7	-232.8	687.0	658.3	28.63	23.992		
7,972.2	7,841.8	7,831.5	7,830.8	22.9	13.7	90.00	-408.7	-232.8	686.2	657.3	28.92	23.730		
8,000.0	7,861.3	7,850.9	7,850.3	22.8	13.7	90.66	-408.7	-232.8	686.3	657.3	28.99	23.674		
8,100.0	7,922.7	7,912.3	7,911.7	22.6	13.8	92.98	-408.7	-232.8	690.7	661.6	29.09	23.744		
8,200.0	7,969.6	7,959.3	7,958.6	22.3	13.9	94.36	-408.7	-232.8	703.2	674.3	28.96	24.285		
8,300.0	8,000.7	7,990.4	7,989.7	22.2	13.9	93.98	-408.7	-232.8	726.2	697.4	28.78	25.232		
8,400.0	8,015.1	8,004.7	8,004.1	22.1	14.0	91.38	-408.7	-232.8	759.9	731.2	28.71	26.471		
8,500.0	8,016.0	8,005.7	8,005.0	22.1	14.0	90.00	-408.7	-232.8	803.4	774.7	28.77	27.925		
8,600.0	8,016.0	8,005.7	8,005.0	22.3	14.0	90.00	-408.7	-232.8	856.4	827.4	29.05	29.483		
8,700.0	8,016.0	8,005.7	8,005.0	22.6	14.0	90.00	-408.7	-232.8	917.3	887.8	29.52	31.074		
8,800.0	8,016.0	8,005.7	8,005.0	23.1	14.0	90.00	-408.7	-232.8	984.5	954.4	30.17	32.636		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3A-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							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	-89.94	0.0	-8.4	8.4					
100.0	100.0	100.0	100.0	0.2	0.2	-89.94	0.0	-8.4	8.4	8.1	0.30	27.668		
200.0	200.0	200.0	200.0	0.3	0.3	-89.94	0.0	-8.4	8.4	7.7	0.65	12.872	CC, ES	
300.0	300.0	299.8	299.8	0.5	0.5	-90.16	0.0	-9.3	9.3	8.3	1.00	9.254		
400.0	400.0	399.6	399.6	0.7	0.7	39.22	-0.1	-11.9	11.2	9.8	1.35	8.290		
500.0	500.0	499.4	499.3	0.9	0.9	44.80	-0.3	-16.2	13.6	11.9	1.70	7.977		
600.0	599.9	599.1	598.8	1.0	1.1	51.77	-0.5	-22.3	16.6	14.5	2.06	8.058		
700.0	699.7	698.7	698.0	1.2	1.3	58.79	-0.9	-30.1	20.5	18.0	2.44	8.401		
800.0	799.4	798.2	797.1	1.4	1.5	65.16	-1.2	-39.6	25.3	22.5	2.84	8.908		
900.0	898.9	897.6	895.8	1.7	1.8	70.60	-1.7	-50.8	31.2	27.9	3.28	9.500		
1,000.0	998.3	996.8	994.2	1.9	2.0	75.13	-2.2	-63.7	38.1	34.4	3.77	10.122		
1,100.0	1,097.4	1,095.9	1,092.3	2.2	2.3	78.86	-2.8	-78.2	46.1	41.8	4.30	10.737		
1,200.0	1,196.3	1,194.9	1,189.9	2.5	2.7	81.93	-3.4	-94.5	55.2	50.3	4.88	11.323		
1,300.0	1,295.0	1,294.3	1,287.8	2.8	3.0	84.62	-4.1	-111.7	64.9	59.4	5.48	11.836		
1,400.0	1,393.7	1,393.8	1,385.8	3.1	3.3	86.65	-4.8	-129.0	74.7	68.6	6.10	12.242		
1,500.0	1,492.4	1,493.3	1,483.8	3.4	3.7	88.21	-5.5	-146.3	84.5	77.8	6.73	12.569		
1,600.0	1,591.1	1,592.8	1,581.7	3.7	4.0	89.44	-6.2	-163.5	94.4	87.1	7.36	12.838		
1,700.0	1,689.8	1,692.3	1,679.7	4.1	4.3	90.44	-6.8	-180.8	104.4	96.4	7.99	13.062		
1,800.0	1,788.6	1,791.8	1,777.7	4.4	4.7	91.27	-7.5	-198.1	114.3	105.7	8.63	13.252		
1,900.0	1,887.3	1,891.2	1,875.7	4.7	5.0	91.96	-8.2	-215.3	124.3	115.1	9.27	13.414		
2,000.0	1,986.0	1,990.7	1,973.7	5.0	5.4	92.55	-8.9	-232.6	134.3	124.4	9.91	13.554		
2,100.0	2,084.7	2,090.2	2,071.6	5.3	5.7	93.06	-9.6	-249.9	144.3	133.8	10.55	13.676		
2,200.0	2,183.4	2,189.7	2,169.6	5.7	6.1	93.50	-10.3	-267.1	154.4	143.2	11.20	13.783		
2,300.0	2,282.1	2,289.2	2,267.6	6.0	6.4	93.89	-11.0	-284.4	164.4	152.6	11.85	13.879		
2,400.0	2,380.8	2,388.7	2,365.6	6.3	6.8	94.23	-11.7	-301.7	174.4	162.0	12.49	13.963		
2,500.0	2,479.5	2,488.2	2,463.5	6.6	7.1	94.54	-12.3	-318.9	184.5	171.3	13.14	14.039		
2,600.0	2,578.2	2,587.7	2,561.5	7.0	7.5	94.82	-13.0	-336.2	194.5	180.8	13.79	14.108		
2,700.0	2,676.9	2,687.2	2,659.5	7.3	7.8	95.06	-13.7	-353.5	204.6	190.2	14.44	14.170		
2,800.0	2,775.6	2,786.7	2,757.5	7.6	8.2	95.29	-14.4	-370.7	214.7	199.6	15.09	14.227		
2,900.0	2,874.3	2,886.1	2,855.5	8.0	8.5	95.49	-15.1	-388.0	224.7	209.0	15.74	14.278		
3,000.0	2,973.0	2,985.6	2,953.4	8.3	8.9	95.68	-15.8	-405.3	234.8	218.4	16.39	14.326		
3,100.0	3,071.8	3,085.1	3,051.4	8.6	9.2	95.85	-16.5	-422.5	244.8	227.8	17.04	14.369		
3,200.0	3,170.5	3,184.6	3,149.4	8.9	9.6	96.01	-17.1	-439.8	254.9	237.2	17.69	14.410		
3,300.0	3,269.2	3,284.1	3,247.4	9.3	9.9	96.15	-17.8	-457.0	265.0	246.6	18.34	14.447		
3,400.0	3,367.9	3,383.6	3,345.3	9.6	10.3	96.29	-18.5	-474.3	275.0	256.1	18.99	14.482		
3,500.0	3,466.6	3,483.1	3,443.3	9.9	10.6	96.41	-19.2	-491.6	285.1	265.5	19.64	14.514		
3,600.0	3,565.3	3,582.6	3,541.3	10.3	11.0	96.53	-19.9	-508.8	295.2	274.9	20.30	14.544		
3,700.0	3,664.0	3,682.1	3,639.3	10.6	11.3	96.64	-20.6	-526.1	305.3	284.3	20.95	14.572		
3,800.0	3,762.7	3,781.6	3,737.3	10.9	11.7	96.74	-21.3	-543.4	315.3	293.7	21.60	14.599		
3,900.0	3,861.4	3,881.0	3,835.2	11.3	12.0	96.84	-22.0	-560.6	325.4	303.2	22.25	14.623		
4,000.0	3,960.1	3,980.5	3,933.2	11.6	12.4	96.93	-22.6	-577.9	335.5	312.6	22.91	14.647		
4,100.0	4,058.8	4,080.0	4,031.2	11.9	12.7	97.01	-23.3	-595.2	345.6	322.0	23.56	14.669		
4,200.0	4,157.5	4,179.5	4,129.2	12.2	13.1	97.09	-24.0	-612.4	355.6	331.4	24.21	14.690		
4,300.0	4,256.2	4,279.0	4,227.1	12.6	13.4	97.17	-24.7	-629.7	365.7	340.9	24.86	14.709		
4,400.0	4,355.0	4,378.5	4,325.1	12.9	13.8	97.24	-25.4	-647.0	375.8	350.3	25.52	14.728		
4,500.0	4,453.7	4,478.0	4,423.1	13.2	14.1	97.31	-26.1	-664.2	385.9	359.7	26.17	14.746		
4,600.0	4,552.4	4,577.5	4,521.1	13.6	14.5	97.37	-26.8	-681.5	396.0	369.1	26.82	14.763		
4,700.0	4,651.1	4,677.0	4,619.1	13.9	14.8	97.44	-27.4	-698.8	406.0	378.6	27.48	14.779		
4,800.0	4,749.8	4,776.4	4,717.0	14.2	15.2	97.49	-28.1	-716.0	416.1	388.0	28.13	14.794		
4,900.0	4,848.5	4,875.9	4,815.0	14.6	15.5	97.55	-28.8	-733.3	426.2	397.4	28.78	14.808		
5,000.0	4,947.2	4,975.4	4,913.0	14.9	15.9	97.60	-29.5	-750.6	436.3	406.9	29.44	14.822		
5,100.0	5,045.9	5,074.9	5,011.0	15.2	16.2	97.65	-30.2	-767.8	446.4	416.3	30.09	14.835		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3A-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
5,200.0	5,144.6	5,174.4	5,108.9	15.6	16.6	97.70	-30.9	-785.1	456.5	425.7	30.74	14.848	
5,300.0	5,243.3	5,273.9	5,206.9	15.9	16.9	97.75	-31.6	-802.4	466.5	435.1	31.40	14.860	
5,400.0	5,342.0	5,373.4	5,304.9	16.2	17.3	97.79	-32.2	-819.6	476.6	444.6	32.05	14.872	
5,500.0	5,440.7	5,472.9	5,402.9	16.5	17.6	97.83	-32.9	-836.9	486.7	454.0	32.70	14.883	
5,600.0	5,539.4	5,572.4	5,500.9	16.9	18.0	97.88	-33.6	-854.1	496.8	463.4	33.36	14.893	
5,700.0	5,638.2	5,671.9	5,598.8	17.2	18.3	97.91	-34.3	-871.4	506.9	472.9	34.01	14.904	
5,800.0	5,736.9	5,771.3	5,696.8	17.5	18.7	97.95	-35.0	-888.7	517.0	482.3	34.66	14.914	
5,900.0	5,835.6	5,870.8	5,794.8	17.9	19.0	97.99	-35.7	-905.9	527.0	491.7	35.32	14.923	
6,000.0	5,934.3	5,970.3	5,892.8	18.2	19.4	98.02	-36.4	-923.2	537.1	501.2	35.97	14.932	
6,100.0	6,033.0	6,069.8	5,990.7	18.5	19.7	98.06	-37.1	-940.5	547.2	510.6	36.62	14.941	
6,200.0	6,131.7	6,169.3	6,088.7	18.9	20.1	98.09	-37.7	-957.7	557.3	520.0	37.28	14.950	
6,300.0	6,230.4	6,268.8	6,186.7	19.2	20.4	98.12	-38.4	-975.0	567.4	529.5	37.93	14.958	
6,400.0	6,329.1	6,368.3	6,284.7	19.5	20.8	98.15	-39.1	-992.3	577.5	538.9	38.59	14.966	
6,500.0	6,427.8	6,467.8	6,382.7	19.9	21.1	98.18	-39.8	-1,009.5	587.6	548.3	39.24	14.973	
6,600.0	6,526.5	6,567.3	6,480.6	20.2	21.5	98.21	-40.5	-1,026.8	597.6	557.8	39.89	14.981	
6,700.0	6,625.2	6,666.8	6,578.6	20.5	21.8	98.23	-41.2	-1,044.1	607.7	567.2	40.55	14.988	
6,800.0	6,723.9	6,766.2	6,676.6	20.9	22.2	98.26	-41.9	-1,061.3	617.8	576.6	41.20	14.995	
6,900.0	6,822.6	6,865.7	6,774.6	21.2	22.5	98.29	-42.5	-1,078.6	627.9	586.0	41.86	15.001	
7,000.0	6,921.4	6,965.2	6,872.5	21.5	22.9	98.31	-43.2	-1,095.9	638.0	595.5	42.51	15.008	
7,100.0	7,020.1	7,064.7	6,970.5	21.8	23.2	98.33	-43.9	-1,113.1	648.1	604.9	43.16	15.014	
7,200.0	7,118.8	7,164.2	7,068.5	22.2	23.6	98.36	-44.6	-1,130.4	658.2	614.3	43.82	15.020	
7,300.0	7,217.5	7,263.7	7,166.5	22.5	24.0	98.38	-45.3	-1,147.7	668.2	623.8	44.47	15.026	
7,400.0	7,316.2	7,340.1	7,241.7	22.8	24.2	98.41	-45.4	-1,160.9	679.1	634.1	45.04	15.077	
7,500.0	7,414.9	7,400.0	7,300.5	23.2	24.4	85.66	-40.4	-1,171.3	696.0	650.5	45.59	15.268	
7,600.0	7,514.0	7,435.4	7,334.9	23.3	24.5	19.92	-34.5	-1,177.3	709.1	663.6	45.48	15.591	
7,700.0	7,611.0	7,483.0	7,380.3	23.4	24.7	-3.62	-23.2	-1,185.3	714.4	670.2	44.21	16.158	
7,800.0	7,703.0	7,530.5	7,424.7	23.3	24.9	-12.15	-8.1	-1,193.2	711.5	669.7	41.83	17.012	
7,900.0	7,787.3	7,578.0	7,467.7	23.1	25.0	-16.93	10.6	-1,200.7	700.7	662.2	38.48	18.211	
8,000.0	7,861.3	7,625.4	7,508.9	22.8	25.2	-20.62	32.9	-1,208.0	682.1	647.7	34.42	19.817	
8,100.0	7,922.7	7,672.7	7,548.1	22.6	25.3	-24.19	58.5	-1,214.9	656.1	626.0	30.10	21.795	
8,200.0	7,969.6	7,719.9	7,584.9	22.3	25.5	-28.12	87.1	-1,221.4	623.5	597.2	26.24	23.757	
8,300.0	8,000.7	7,766.8	7,619.2	22.2	25.7	-32.77	118.6	-1,227.4	584.9	561.1	23.85	24.527	
8,400.0	8,015.1	7,813.3	7,650.5	22.1	25.9	-38.41	152.5	-1,233.0	541.7	517.9	23.79	22.767	
8,500.0	8,016.0	7,860.9	7,679.7	22.1	26.1	-42.48	189.8	-1,238.1	497.9	473.0	24.89	20.003	
8,600.0	8,016.0	7,914.7	7,708.8	22.3	26.3	-45.58	234.6	-1,243.2	462.1	436.2	25.94	17.814	
8,700.0	8,016.0	7,975.2	7,736.5	22.6	26.6	-48.76	288.2	-1,248.1	435.2	408.0	27.19	16.007	
8,800.0	8,016.0	8,042.2	7,760.5	23.1	27.0	-51.70	350.5	-1,252.3	416.7	388.1	28.61	14.563	
8,900.0	8,016.0	8,114.6	7,778.2	23.6	27.4	-53.99	420.7	-1,255.4	405.7	375.6	30.17	13.449	
9,000.0	8,016.0	8,190.8	7,787.2	24.3	27.9	-55.22	496.2	-1,257.0	401.2	369.5	31.76	12.634	
9,027.5	8,016.0	8,212.0	7,787.9	24.5	28.0	-55.33	517.4	-1,257.2	401.0	368.8	32.19	12.457	
9,100.0	8,016.0	8,281.6	7,788.0	25.1	28.5	-55.39	587.1	-1,257.2	401.5	368.0	33.44	12.005	
9,200.0	8,016.0	8,381.6	7,788.0	26.0	29.3	-55.47	687.1	-1,257.2	402.2	366.9	35.34	11.381	
9,300.0	8,016.0	8,481.6	7,788.0	26.9	30.2	-55.54	787.1	-1,257.2	402.9	365.5	37.37	10.782	
9,400.0	8,016.0	8,581.6	7,788.0	28.0	31.1	-55.61	887.1	-1,257.2	403.6	364.1	39.51	10.215	
9,500.0	8,016.0	8,681.6	7,788.0	29.1	32.1	-55.68	987.1	-1,257.2	404.4	362.6	41.75	9.684	
9,600.0	8,016.0	8,781.6	7,788.0	30.3	33.2	-55.75	1,087.1	-1,257.2	405.1	361.0	44.08	9.189	
9,700.0	8,016.0	8,881.6	7,788.0	31.5	34.3	-55.81	1,187.1	-1,257.2	405.8	359.3	46.48	8.731	
9,800.0	8,016.0	8,981.6	7,788.0	32.8	35.4	-55.88	1,287.1	-1,257.2	406.5	357.6	48.94	8.307	
9,900.0	8,016.0	9,081.6	7,788.0	34.1	36.7	-55.95	1,387.0	-1,257.2	407.2	355.8	51.45	7.915	
10,000.0	8,016.0	9,181.6	7,788.0	35.5	37.9	-56.02	1,487.0	-1,257.2	408.0	354.0	54.01	7.553	
10,100.0	8,016.0	9,281.6	7,788.0	36.8	39.2	-56.09	1,587.0	-1,257.2	408.7	352.1	56.61	7.219	
10,200.0	8,016.0	9,381.6	7,788.0	38.3	40.6	-56.16	1,687.0	-1,257.2	409.4	350.2	59.25	6.910	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3A-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				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
10,300.0	8,016.0	9,481.6	7,788.0	39.7	41.9	-56.23	1,787.0	-1,257.2	410.1	348.2		61.92	6.623
10,400.0	8,016.0	9,581.6	7,788.0	41.2	43.3	-56.29	1,887.0	-1,257.2	410.9	346.2		64.62	6.358
10,500.0	8,016.0	9,681.6	7,788.0	42.7	44.7	-56.36	1,987.0	-1,257.2	411.6	344.2		67.35	6.111
10,600.0	8,016.0	9,781.6	7,788.0	44.2	46.2	-56.43	2,087.0	-1,257.2	412.3	342.2		70.10	5.882
10,700.0	8,016.0	9,881.6	7,788.0	45.7	47.7	-56.49	2,187.0	-1,257.2	413.0	340.2		72.87	5.668
10,800.0	8,016.0	9,981.6	7,788.0	47.3	49.1	-56.56	2,287.0	-1,257.2	413.8	338.1		75.66	5.468
10,900.0	8,016.0	10,081.6	7,788.0	48.8	50.6	-56.63	2,387.0	-1,257.2	414.5	336.0		78.47	5.282
11,000.0	8,016.0	10,181.6	7,788.0	50.4	52.2	-56.69	2,487.0	-1,257.2	415.2	333.9		81.30	5.107
11,100.0	8,016.0	10,281.6	7,788.0	52.0	53.7	-56.76	2,587.0	-1,257.2	416.0	331.8		84.14	4.944
11,200.0	8,016.0	10,381.6	7,788.0	53.6	55.2	-56.83	2,687.0	-1,257.2	416.7	329.7		86.99	4.790
11,300.0	8,016.0	10,481.6	7,788.0	55.2	56.8	-56.89	2,787.0	-1,257.2	417.4	327.6		89.86	4.645
11,400.0	8,016.0	10,581.6	7,788.0	56.8	58.4	-56.96	2,887.0	-1,257.2	418.1	325.4		92.74	4.509
11,500.0	8,016.0	10,681.5	7,788.0	58.4	59.9	-57.02	2,987.0	-1,257.2	418.9	323.2		95.64	4.380
11,600.0	8,016.0	10,781.5	7,788.0	60.0	61.5	-57.09	3,087.0	-1,257.2	419.6	321.1		98.54	4.258
11,700.0	8,016.0	10,881.5	7,788.0	61.7	63.1	-57.15	3,187.0	-1,257.2	420.3	318.9		101.45	4.143
11,800.0	8,016.0	10,981.5	7,788.0	63.3	64.7	-57.22	3,287.0	-1,257.2	421.1	316.7		104.37	4.034
11,900.0	8,016.0	11,081.5	7,788.0	65.0	66.3	-57.28	3,387.0	-1,257.2	421.8	314.5		107.31	3.931
12,000.0	8,016.0	11,181.5	7,788.0	66.6	68.0	-57.34	3,487.0	-1,257.2	422.5	312.3		110.25	3.833
12,100.0	8,016.0	11,281.5	7,788.0	68.3	69.6	-57.41	3,587.0	-1,257.2	423.3	310.1		113.20	3.739
12,200.0	8,016.0	11,381.5	7,788.0	69.9	71.2	-57.47	3,687.0	-1,257.2	424.0	307.9		116.15	3.651
12,300.0	8,016.0	11,481.5	7,788.0	71.6	72.9	-57.53	3,787.0	-1,257.2	424.8	305.6		119.12	3.566
12,400.0	8,016.0	11,581.5	7,788.0	73.3	74.5	-57.60	3,887.0	-1,257.2	425.5	303.4		122.09	3.485
12,500.0	8,016.0	11,681.5	7,788.0	75.0	76.1	-57.66	3,987.0	-1,257.2	426.2	301.2		125.07	3.408
12,600.0	8,016.0	11,781.5	7,788.0	76.6	77.8	-57.72	4,086.9	-1,257.2	427.0	298.9		128.05	3.334
12,700.0	8,016.0	11,881.5	7,788.0	78.3	79.5	-57.79	4,186.9	-1,257.2	427.7	296.7		131.05	3.264
12,800.0	8,016.0	11,981.5	7,788.0	80.0	81.1	-57.85	4,286.9	-1,257.2	428.4	294.4		134.04	3.196
12,900.0	8,016.0	12,081.5	7,788.0	81.7	82.8	-57.91	4,386.9	-1,257.2	429.2	292.1		137.05	3.132
13,000.0	8,016.0	12,181.5	7,788.0	83.4	84.4	-58.01	4,486.9	-1,257.2	430.4	290.6		139.79	3.079
13,100.0	8,016.0	12,281.5	7,788.0	85.1	86.1	-58.14	4,586.9	-1,257.2	432.1	289.1		142.91	3.023
13,200.0	8,016.0	12,381.4	7,788.0	86.8	87.8	-58.28	4,686.9	-1,257.2	433.7	287.7		146.04	2.970
13,300.0	8,016.0	12,481.4	7,788.0	88.4	89.5	-58.41	4,786.9	-1,257.2	435.3	286.1		149.17	2.918
13,400.0	8,016.0	12,581.4	7,788.0	90.1	91.2	-58.54	4,886.9	-1,257.2	437.0	284.6		152.32	2.869
13,500.0	8,016.0	12,681.4	7,788.0	91.8	92.8	-58.67	4,986.8	-1,257.2	438.6	283.1		155.47	2.821
13,600.0	8,016.0	12,781.4	7,788.0	93.5	94.5	-58.80	5,086.8	-1,257.2	440.2	281.6		158.64	2.775
13,700.0	8,016.0	12,881.4	7,788.0	95.2	96.2	-58.93	5,186.8	-1,257.2	441.9	280.1		161.80	2.731
13,800.0	8,016.0	12,981.3	7,788.0	97.0	97.9	-59.06	5,286.8	-1,257.2	443.5	278.5		164.98	2.688
13,900.0	8,016.0	13,081.3	7,788.0	98.7	99.6	-59.19	5,386.8	-1,257.2	445.2	277.0		168.16	2.647
14,000.0	8,016.0	13,181.3	7,788.0	100.4	101.3	-59.31	5,486.7	-1,257.2	446.8	275.5		171.35	2.608
14,100.0	8,016.0	13,281.3	7,788.0	102.1	103.0	-59.44	5,586.7	-1,257.2	448.5	273.9		174.55	2.569
14,200.0	8,016.0	13,381.3	7,788.0	103.8	104.7	-59.56	5,686.7	-1,257.2	450.1	272.4		177.75	2.532
14,300.0	8,016.0	13,481.2	7,788.0	105.5	106.4	-59.69	5,786.7	-1,257.2	451.8	270.8		180.96	2.497
14,400.0	8,016.0	13,581.2	7,788.0	107.2	108.1	-59.81	5,886.7	-1,257.2	453.4	269.3		184.18	2.462
14,500.0	8,016.0	13,681.2	7,788.0	108.9	109.8	-59.93	5,986.6	-1,257.2	455.1	267.7		187.40	2.428
14,600.0	8,016.0	13,781.2	7,788.0	110.6	111.5	-60.05	6,086.6	-1,257.2	456.8	266.1		190.63	2.396
14,700.0	8,016.0	13,881.2	7,788.0	112.4	113.2	-60.17	6,186.6	-1,257.2	458.4	264.6		193.87	2.365
14,800.0	8,016.0	13,981.2	7,788.0	114.1	114.9	-60.29	6,286.6	-1,257.2	460.1	263.0		197.11	2.334
14,900.0	8,016.0	14,081.1	7,788.0	115.8	116.6	-60.41	6,386.6	-1,257.2	461.8	261.4		200.35	2.305
15,000.0	8,016.0	14,181.1	7,788.0	117.5	118.3	-60.52	6,486.6	-1,257.2	463.4	259.8		203.60	2.276
15,100.0	8,016.0	14,281.1	7,788.0	119.2	120.1	-60.64	6,586.5	-1,257.2	465.1	258.3		206.86	2.248
15,200.0	8,016.0	14,381.1	7,788.0	121.0	121.8	-60.76	6,686.5	-1,257.2	466.8	256.7		210.12	2.222
15,300.0	8,016.0	14,481.1	7,788.0	122.7	123.5	-60.87	6,786.5	-1,257.2	468.5	255.1		213.39	2.195
15,400.0	8,016.0	14,581.0	7,788.0	124.4	125.2	-60.99	6,886.5	-1,257.2	470.1	253.5		216.66	2.170

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3A-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						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		
15,500.0	8,016.0	14,681.0	7,788.0	126.1	126.9	-61.10	6,986.5	-1,257.2	471.8	251.9	219.94	2.145		
15,600.0	8,016.0	14,781.0	7,788.0	127.9	128.6	-61.21	7,086.4	-1,257.2	473.4	250.1	223.37	2.120		
15,700.0	8,016.0	14,881.0	7,788.0	129.6	130.4	-61.24	7,186.4	-1,257.2	473.9	246.9	227.06	2.087		
15,738.4	8,016.0	14,919.4	7,788.0	130.3	131.0	-61.23	7,224.9	-1,257.2	473.7	245.3	228.40	2.074 SF		
15,800.0	8,016.0	14,921.8	7,788.0	131.3	131.1	-61.24	7,227.3	-1,257.2	476.6	246.9	229.70	2.075		
15,900.0	8,016.0	14,921.8	7,788.0	133.1	131.1	-61.34	7,227.3	-1,257.2	496.6	264.7	231.86	2.142		
16,000.0	8,016.0	14,921.8	7,788.0	134.8	131.1	-61.53	7,227.3	-1,257.2	533.4	299.3	234.15	2.278		
16,100.0	8,016.0	14,921.8	7,788.0	136.6	131.1	-61.81	7,227.3	-1,257.2	584.0	347.4	236.57	2.468		
16,200.0	8,016.0	14,921.8	7,788.0	138.3	131.1	-62.13	7,227.3	-1,257.2	645.0	406.0	238.97	2.699		
16,300.0	8,016.0	14,921.8	7,788.0	140.0	131.1	-62.13	7,227.3	-1,257.2	714.5	473.9	240.52	2.971		
16,400.0	8,016.0	14,921.8	7,788.0	141.8	131.1	-62.13	7,227.3	-1,257.2	790.5	548.4	242.06	3.266		
16,500.0	8,016.0	14,921.8	7,788.0	143.5	131.1	-62.13	7,227.3	-1,257.2	871.4	627.8	243.61	3.577		
16,600.0	8,016.0	14,921.8	7,788.0	145.3	131.1	-62.13	7,227.3	-1,257.2	955.9	710.7	245.16	3.899		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3C-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		
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	11.2	11.2						
100.0	100.0	100.0	100.0	0.2	0.2	90.04	0.0	11.2	11.2	10.9	0.30	36.890			
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	11.2	11.2	10.6	0.65	17.163			
300.0	300.0	300.0	300.0	0.5	0.5	90.04	0.0	11.2	11.2	10.2	1.00	11.183 CC, ES			
400.0	400.0	400.0	400.0	0.7	0.7	-145.30	0.0	11.2	11.9	10.6	1.35	8.815			
500.0	500.0	500.0	500.0	0.9	0.9	-147.92	-0.9	11.1	13.9	12.2	1.70	8.162			
600.0	599.9	600.1	600.0	1.0	1.0	-147.19	-3.4	10.6	16.9	14.8	2.06	8.218			
700.0	699.7	700.0	699.9	1.2	1.2	-144.66	-7.7	9.8	21.0	18.5	2.42	8.656			
800.0	799.4	800.0	799.6	1.4	1.4	-141.48	-13.8	8.8	26.2	23.3	2.81	9.322			
900.0	898.9	899.8	899.2	1.7	1.6	-138.29	-21.5	7.4	32.5	29.3	3.21	10.117			
1,000.0	998.3	999.6	998.5	1.9	1.8	-135.37	-30.9	5.8	40.1	36.4	3.65	10.975			
1,100.0	1,097.4	1,099.2	1,097.4	2.2	2.1	-132.81	-42.0	3.8	48.9	44.8	4.13	11.846			
1,200.0	1,196.3	1,198.6	1,196.0	2.5	2.3	-130.60	-54.7	1.6	59.0	54.3	4.65	12.696			
1,300.0	1,295.0	1,297.9	1,294.3	2.8	2.6	-128.43	-69.2	-1.0	70.0	64.8	5.20	13.453			
1,400.0	1,393.7	1,397.1	1,392.1	3.1	2.9	-125.68	-85.2	-3.8	81.3	75.5	5.80	14.014			
1,500.0	1,492.4	1,496.1	1,489.4	3.4	3.3	-122.55	-102.9	-6.9	93.0	86.5	6.43	14.454			
1,600.0	1,591.1	1,594.8	1,586.2	3.7	3.6	-119.22	-122.3	-10.4	105.3	98.2	7.10	14.834			
1,700.0	1,689.8	1,693.3	1,682.3	4.1	4.0	-115.80	-143.1	-14.0	118.3	110.5	7.78	15.203			
1,800.0	1,788.6	1,791.3	1,777.7	4.4	4.4	-112.38	-165.6	-18.0	132.2	123.8	8.48	15.592			
1,900.0	1,887.3	1,889.6	1,872.9	4.7	4.8	-109.11	-189.3	-22.2	147.1	137.9	9.18	16.026			
2,000.0	1,986.0	1,988.1	1,968.4	5.0	5.3	-106.40	-213.3	-26.4	162.4	152.5	9.87	16.458			
2,100.0	2,084.7	2,088.4	2,065.6	5.3	5.7	-104.07	-237.6	-31.0	177.7	167.2	10.56	16.833			
2,200.0	2,183.4	2,190.1	2,164.2	5.7	6.2	-101.88	-261.8	-37.3	191.9	180.6	11.26	17.045			
2,300.0	2,282.1	2,290.3	2,261.3	6.0	6.6	-99.83	-285.4	-44.9	204.9	193.0	11.94	17.159			
2,400.0	2,380.8	2,389.2	2,357.1	6.3	7.1	-98.03	-308.5	-52.5	218.1	205.4	12.62	17.282			
2,500.0	2,479.5	2,488.1	2,453.0	6.6	7.5	-96.43	-331.7	-60.2	231.4	218.1	13.29	17.413			
2,600.0	2,578.2	2,587.0	2,548.8	7.0	8.0	-95.01	-354.9	-67.9	244.9	230.9	13.95	17.549			
2,700.0	2,676.9	2,686.0	2,644.7	7.3	8.4	-93.73	-378.1	-75.5	258.5	243.9	14.62	17.686			
2,800.0	2,775.6	2,784.9	2,740.5	7.6	8.9	-92.59	-401.3	-83.2	272.2	257.0	15.28	17.822			
2,900.0	2,874.3	2,883.8	2,836.4	8.0	9.3	-91.55	-424.5	-90.9	286.1	270.1	15.93	17.956			
3,000.0	2,973.0	2,982.7	2,932.2	8.3	9.8	-90.61	-447.7	-98.5	300.0	283.4	16.59	18.088			
3,100.0	3,071.8	3,081.6	3,028.1	8.6	10.2	-89.75	-470.9	-106.2	314.0	296.7	17.24	18.215			
3,200.0	3,170.5	3,180.5	3,123.9	8.9	10.7	-88.97	-494.0	-113.8	328.0	310.1	17.89	18.339			
3,300.0	3,269.2	3,279.4	3,219.8	9.3	11.1	-88.25	-517.2	-121.5	342.1	323.6	18.54	18.459			
3,400.0	3,367.9	3,378.3	3,315.6	9.6	11.6	-87.59	-540.4	-129.2	356.3	337.1	19.18	18.575			
3,500.0	3,466.6	3,477.3	3,411.5	9.9	12.0	-86.97	-563.6	-136.8	370.5	350.7	19.83	18.686			
3,600.0	3,565.3	3,576.2	3,507.3	10.3	12.5	-86.41	-586.8	-144.5	384.7	364.3	20.47	18.793			
3,700.0	3,664.0	3,675.1	3,603.2	10.6	12.9	-85.88	-610.0	-152.2	399.0	377.9	21.12	18.896			
3,800.0	3,762.7	3,774.0	3,699.0	10.9	13.4	-85.39	-633.2	-159.8	413.3	391.6	21.76	18.996			
3,900.0	3,861.4	3,872.9	3,794.9	11.3	13.9	-84.93	-656.4	-167.5	427.6	405.2	22.40	19.091			
4,000.0	3,960.1	3,971.8	3,890.7	11.6	14.3	-84.51	-679.5	-175.2	442.0	419.0	23.04	19.183			
4,100.0	4,058.8	4,070.7	3,986.6	11.9	14.8	-84.10	-702.7	-182.8	456.4	432.7	23.68	19.271			
4,200.0	4,157.5	4,169.6	4,082.4	12.2	15.2	-83.73	-725.9	-190.5	470.8	446.5	24.32	19.356			
4,300.0	4,256.2	4,268.5	4,178.3	12.6	15.7	-83.37	-749.1	-198.2	485.2	460.2	24.96	19.438			
4,400.0	4,355.0	4,367.5	4,274.1	12.9	16.1	-83.04	-772.3	-205.8	499.6	474.0	25.60	19.516			
4,500.0	4,453.7	4,466.4	4,370.0	13.2	16.6	-82.73	-795.5	-213.5	514.1	487.8	26.24	19.592			
4,600.0	4,552.4	4,565.3	4,465.8	13.6	17.1	-82.43	-818.7	-221.2	528.5	501.7	26.88	19.665			
4,700.0	4,651.1	4,664.2	4,561.7	13.9	17.5	-82.15	-841.9	-228.8	543.0	515.5	27.52	19.735			
4,800.0	4,749.8	4,763.1	4,657.5	14.2	18.0	-81.88	-865.0	-236.5	557.5	529.4	28.15	19.803			
4,900.0	4,848.5	4,862.0	4,753.4	14.6	18.4	-81.63	-888.2	-244.2	572.0	543.2	28.79	19.868			
5,000.0	4,947.2	4,960.9	4,849.2	14.9	18.9	-81.38	-911.4	-251.8	586.5	557.1	29.43	19.931			
5,100.0	5,045.9	5,059.8	4,945.1	15.2	19.4	-81.16	-934.6	-259.5	601.0	571.0	30.06	19.992			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3C-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							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		
5,200.0	5,144.6	5,158.8	5,040.9	15.6	19.8	-80.94	-957.8	-267.2	615.6	584.9	30.70	20.051		
5,300.0	5,243.3	5,257.7	5,136.8	15.9	20.3	-80.73	-981.0	-274.8	630.1	598.8	31.34	20.108		
5,400.0	5,342.0	5,356.6	5,232.6	16.2	20.7	-80.53	-1,004.2	-282.5	644.7	612.7	31.97	20.163		
5,500.0	5,440.7	5,455.5	5,328.5	16.5	21.2	-80.34	-1,027.4	-290.1	659.2	626.6	32.61	20.216		
5,600.0	5,539.4	5,554.4	5,424.3	16.9	21.6	-80.16	-1,050.5	-297.8	673.8	640.5	33.24	20.267		
5,700.0	5,638.2	5,653.3	5,520.2	17.2	22.1	-79.98	-1,073.7	-305.5	688.3	654.5	33.88	20.317		
5,800.0	5,736.9	5,752.2	5,616.0	17.5	22.6	-79.82	-1,096.9	-313.1	702.9	668.4	34.52	20.365		
5,900.0	5,835.6	5,851.1	5,711.9	17.9	23.0	-79.66	-1,120.1	-320.8	717.5	682.3	35.15	20.412		
6,000.0	5,934.3	5,950.1	5,807.7	18.2	23.5	-79.50	-1,143.3	-328.5	732.1	696.3	35.79	20.457		
6,100.0	6,033.0	6,049.0	5,903.6	18.5	23.9	-79.35	-1,166.5	-336.1	746.7	710.2	36.42	20.501		
6,200.0	6,131.7	6,147.9	5,999.4	18.9	24.4	-79.21	-1,189.7	-343.8	761.3	724.2	37.06	20.543		
6,300.0	6,230.4	6,246.8	6,095.3	19.2	24.9	-79.07	-1,212.9	-351.5	775.9	738.2	37.69	20.584		
6,400.0	6,329.1	6,345.7	6,191.1	19.5	25.3	-78.94	-1,236.0	-359.1	790.5	752.1	38.33	20.624		
6,500.0	6,427.8	6,444.6	6,287.0	19.9	25.8	-78.82	-1,259.2	-366.8	805.1	766.1	38.96	20.663		
6,600.0	6,526.5	6,543.5	6,382.8	20.2	26.2	-78.69	-1,282.4	-374.5	819.7	780.1	39.60	20.701		
6,700.0	6,625.2	6,642.4	6,478.7	20.5	26.7	-78.57	-1,305.6	-382.1	834.3	794.1	40.23	20.738		
6,800.0	6,723.9	6,741.3	6,574.5	20.9	27.2	-78.46	-1,328.8	-389.8	848.9	808.0	40.87	20.774		
6,900.0	6,822.6	6,840.3	6,670.4	21.2	27.6	-78.35	-1,352.0	-397.5	863.5	822.0	41.50	20.808		
7,000.0	6,921.4	6,939.2	6,766.2	21.5	28.1	-78.24	-1,375.2	-405.1	878.2	836.0	42.13	20.842		
7,100.0	7,020.1	7,038.0	6,863.0	21.8	28.6	-78.12	-1,398.4	-412.8	892.9	850.0	42.76	20.876		
7,200.0	7,118.8	7,136.6	6,959.8	22.2	29.0	-78.00	-1,421.6	-420.5	907.6	864.0	43.39	20.910		
7,300.0	7,217.5	7,235.3	7,056.6	22.5	29.5	-77.88	-1,444.8	-428.2	922.3	878.0	44.02	20.944		
7,400.0	7,316.2	7,334.0	7,153.4	22.8	30.0	-77.76	-1,468.0	-435.9	937.0	892.0	44.65	20.978		
7,500.0	7,414.9	7,432.7	7,250.2	23.2	30.6	-77.64	-1,491.2	-443.6	951.7	906.0	45.28	21.012		
7,600.0	7,513.6	7,531.4	7,347.0	23.5	31.1	-77.52	-1,514.4	-451.3	966.4	920.0	45.91	21.046		
7,700.0	7,611.0	7,628.8	7,443.8	23.8	31.6	-77.40	-1,537.6	-459.0	981.1	934.0	46.54	21.080		
7,800.0	7,709.7	7,727.5	7,540.6	24.2	32.0	-77.28	-1,560.8	-466.7	995.8	948.0	47.17	21.114		
7,846.7	7,743.5	7,761.3	7,574.4	24.5	32.5	-77.16	-1,584.0	-474.4	1,010.5	962.0	47.80	21.148		
7,900.0	7,787.3	7,805.1	7,617.2	23.1	19.8	96.60	-532.5	-505.9	401.4	368.1	33.30	12.054		
8,000.0	7,861.3	7,879.1	7,691.2	22.8	19.4	86.10	-465.8	-507.0	415.6	384.3	31.32	13.273		
8,100.0	7,922.7	7,940.5	7,753.2	22.6	19.0	76.43	-387.3	-508.4	436.3	406.5	29.73	14.673		
8,200.0	7,969.6	7,987.4	7,799.8	22.3	18.6	66.76	-309.3	-509.9	456.4	427.8	28.62	15.949		
8,300.0	8,000.7	8,018.5	7,830.2	22.2	18.5	63.80	-204.4	-511.6	471.0	443.0	27.98	16.836		
8,400.0	8,015.1	8,032.9	7,844.6	22.1	18.4	61.56	-105.6	-513.3	477.0	449.1	27.87	17.112		
8,500.0	8,016.0	8,033.8	7,845.5	22.1	18.5	61.32	-5.6	-515.1	475.2	447.1	28.14	16.887		
8,600.0	8,016.0	8,033.8	7,845.5	22.3	18.8	61.17	94.3	-516.8	472.9	444.3	28.68	16.493		
8,700.0	8,016.0	8,033.8	7,845.5	22.6	19.2	61.02	194.3	-518.5	470.6	441.1	29.52	15.943		
8,800.0	8,016.0	8,033.8	7,845.5	23.1	19.8	60.86	294.2	-520.3	468.4	437.7	30.65	15.281		
8,900.0	8,016.0	8,033.8	7,845.5	23.6	20.5	60.70	394.2	-522.0	466.1	434.0	32.03	14.552		
9,000.0	8,016.0	8,033.8	7,845.5	24.3	21.3	60.55	494.1	-523.8	463.8	430.2	33.62	13.794		
9,100.0	8,016.0	8,033.8	7,845.5	25.1	22.2	60.39	594.1	-525.5	461.5	426.1	35.40	13.036		
9,200.0	8,016.0	8,033.8	7,845.5	26.0	23.3	60.22	694.0	-527.3	459.2	421.9	37.34	12.299		
9,300.0	8,016.0	8,033.8	7,845.5	26.9	24.4	60.06	794.0	-529.0	457.0	417.6	39.40	11.597		
9,400.0	8,016.0	8,033.8	7,845.5	28.0	25.6	59.90	893.9	-530.8	454.7	413.1	41.58	10.936		
9,500.0	8,016.0	8,033.8	7,845.5	29.1	26.8	59.73	993.9	-532.5	452.4	408.6	43.84	10.320		
9,600.0	8,016.0	8,033.8	7,845.5	30.3	28.1	59.56	1,093.8	-534.3	450.2	404.0	46.18	9.748		
9,700.0	8,016.0	8,033.8	7,845.5	31.5	29.5	59.39	1,193.8	-536.0	447.9	399.3	48.58	9.220		
9,800.0	8,016.0	8,033.8	7,845.5	32.8	30.9	59.22	1,293.7	-537.7	445.7	394.6	51.03	8.733		
9,900.0	8,016.0	8,033.8	7,845.5	34.1	32.3	59.05	1,393.7	-539.5	443.4	389.9	53.52	8.285		
10,000.0	8,016.0	8,033.8	7,845.5	35.5	33.7	58.87	1,493.6	-541.2	441.2	385.1	56.05	7.871		
10,100.0	8,016.0	8,033.8	7,845.5	36.8	35.2	58.70	1,593.6	-543.0	438.9	380.3	58.60	7.490		
10,200.0	8,016.0	8,033.8	7,845.5	38.3	36.7	58.52	1,693.5	-544.7	436.7	375.5	61.18	7.138		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3C-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
10,300.0	8,016.0	10,991.8	7,788.0	39.7	38.3	58.34	1,793.5	-546.5	434.5	370.7	63.77	6.813	
10,400.0	8,016.0	11,091.7	7,788.0	41.2	39.8	58.16	1,893.4	-548.2	432.3	365.9	66.38	6.512	
10,500.0	8,016.0	11,191.7	7,788.0	42.7	41.4	57.97	1,993.4	-550.0	430.0	361.0	69.00	6.233	
10,600.0	8,016.0	11,291.7	7,788.0	44.2	42.9	57.79	2,093.3	-551.7	427.8	356.2	71.62	5.973	
10,700.0	8,016.0	11,391.6	7,788.0	45.7	44.5	57.60	2,193.3	-553.4	425.6	351.3	74.25	5.732	
10,800.0	8,016.0	11,491.6	7,788.0	47.3	46.1	57.41	2,293.2	-555.2	423.4	346.5	76.88	5.507	
10,900.0	8,016.0	11,591.6	7,788.0	48.8	47.7	57.22	2,393.2	-556.9	421.2	341.7	79.52	5.297	
11,000.0	8,016.0	11,691.5	7,788.0	50.4	49.4	57.02	2,493.1	-558.7	419.0	336.8	82.15	5.101	
11,100.0	8,016.0	11,791.5	7,788.0	52.0	51.0	56.83	2,593.1	-560.4	416.8	332.0	84.77	4.917	
11,200.0	8,016.0	11,891.5	7,788.0	53.6	52.6	56.63	2,693.0	-562.2	414.6	327.2	87.39	4.744	
11,300.0	8,016.0	11,991.4	7,788.0	55.2	54.3	56.43	2,793.0	-563.9	412.4	322.4	90.01	4.582	
11,400.0	8,016.0	12,091.4	7,788.0	56.8	55.9	56.23	2,892.9	-565.7	410.2	317.6	92.62	4.429	
11,500.0	8,016.0	12,191.3	7,788.0	58.4	57.6	56.02	2,992.9	-567.4	408.1	312.9	95.22	4.286	
11,600.0	8,016.0	12,291.3	7,788.0	60.0	59.3	55.82	3,092.8	-569.1	405.9	308.1	97.81	4.150	
11,700.0	8,016.0	12,391.3	7,788.0	61.7	60.9	55.61	3,192.8	-570.9	403.7	303.4	100.39	4.022	
11,800.0	8,016.0	12,491.2	7,788.0	63.3	62.6	55.40	3,292.7	-572.6	401.6	298.6	102.96	3.900	
11,900.0	8,016.0	12,591.2	7,788.0	65.0	64.3	55.18	3,392.7	-574.4	399.4	293.9	105.52	3.786	
12,000.0	8,016.0	12,691.2	7,788.0	66.6	66.0	54.97	3,492.6	-576.1	397.3	289.2	108.06	3.677	
12,100.0	8,016.0	12,791.1	7,788.0	68.3	67.6	54.75	3,592.6	-577.9	395.1	284.6	110.59	3.573	
12,200.0	8,016.0	12,891.1	7,788.0	69.9	69.3	54.53	3,692.5	-579.6	393.0	279.9	113.10	3.475	
12,300.0	8,016.0	12,991.1	7,788.0	71.6	71.0	54.31	3,792.5	-581.4	390.9	275.3	115.60	3.381	
12,400.0	8,016.0	13,091.0	7,788.0	73.3	72.7	54.08	3,892.4	-583.1	388.8	270.7	118.08	3.292	
12,500.0	8,016.0	13,191.0	7,788.0	75.0	74.4	53.86	3,992.4	-584.8	386.6	266.1	120.54	3.207	
12,600.0	8,016.0	13,291.0	7,788.0	76.6	76.1	53.63	4,092.4	-586.6	384.5	261.5	122.99	3.126	
12,700.0	8,016.0	13,390.9	7,788.0	78.3	77.8	53.39	4,192.3	-588.3	382.4	257.0	125.42	3.049	
12,800.0	8,016.0	13,490.9	7,788.0	80.0	79.5	53.16	4,292.3	-590.1	380.3	252.5	127.83	2.975	
12,900.0	8,016.0	13,590.9	7,788.0	81.7	81.2	52.92	4,392.2	-591.8	378.2	248.0	130.22	2.905	
13,000.0	8,016.0	13,690.8	7,788.0	83.4	82.9	52.62	4,492.1	-593.6	375.7	243.4	132.25	2.841	
13,100.0	8,016.0	13,790.7	7,788.0	85.1	84.7	52.27	4,592.1	-595.3	372.8	238.3	134.43	2.773	
13,200.0	8,016.0	13,890.7	7,788.0	86.8	86.4	51.93	4,692.0	-597.1	369.9	233.3	136.57	2.708	
13,300.0	8,016.0	13,986.2	7,788.0	88.4	88.0	51.65	4,787.5	-598.1	367.5	228.8	138.76	2.649	
13,400.0	8,016.0	14,081.4	7,788.0	90.1	89.6	51.33	4,882.7	-597.5	366.5	225.3	141.19	2.596	
13,500.0	8,016.0	14,181.0	7,788.0	91.8	91.3	51.50	4,982.2	-595.9	366.3	222.4	143.84	2.546	
13,600.0	8,016.0	14,281.0	7,788.0	93.5	93.0	51.47	5,082.2	-594.3	366.0	219.5	146.49	2.499	
13,700.0	8,016.0	14,381.0	7,788.0	95.2	94.8	51.44	5,182.2	-592.7	365.8	216.6	149.15	2.452	
13,800.0	8,016.0	14,481.0	7,788.0	97.0	96.5	51.41	5,282.2	-591.1	365.5	213.7	151.80	2.408	
13,900.0	8,016.0	14,581.0	7,788.0	98.7	98.2	51.38	5,382.2	-589.5	365.3	210.8	154.45	2.365	
14,000.0	8,016.0	14,681.0	7,788.0	100.4	99.9	51.35	5,482.2	-587.9	365.0	207.9	157.10	2.324	
14,100.0	8,016.0	14,781.0	7,788.0	102.1	101.6	51.32	5,582.1	-586.2	364.8	205.0	159.75	2.284	
14,200.0	8,016.0	14,881.0	7,788.0	103.8	103.4	51.29	5,682.1	-584.6	364.6	202.2	162.40	2.245	
14,300.0	8,016.0	14,981.0	7,788.0	105.5	105.1	51.26	5,782.1	-583.0	364.3	199.3	165.05	2.207	
14,400.0	8,016.0	15,081.0	7,788.0	107.2	106.8	51.23	5,882.1	-581.4	364.1	196.4	167.70	2.171	
14,500.0	8,016.0	15,181.0	7,788.0	108.9	108.5	51.19	5,982.1	-579.8	363.8	193.5	170.34	2.136	
14,600.0	8,016.0	15,281.0	7,788.0	110.6	110.2	51.16	6,082.1	-578.2	363.6	190.6	172.98	2.102	
14,700.0	8,016.0	15,381.0	7,788.0	112.4	112.0	51.13	6,182.1	-576.6	363.3	187.7	175.63	2.069	
14,800.0	8,016.0	15,481.0	7,788.0	114.1	113.7	51.10	6,282.1	-575.0	363.1	184.8	178.27	2.037	
14,900.0	8,016.0	15,581.0	7,788.0	115.8	115.4	51.07	6,382.0	-573.4	362.8	181.9	180.91	2.006	
15,000.0	8,016.0	15,681.0	7,788.0	117.5	117.2	51.04	6,482.0	-571.8	362.6	179.1	183.54	1.976	
15,100.0	8,016.0	15,781.0	7,788.0	119.2	118.9	51.01	6,582.0	-570.2	362.4	176.2	186.18	1.946	
15,200.0	8,016.0	15,881.0	7,788.0	121.0	120.6	50.98	6,682.0	-568.6	362.1	173.3	188.81	1.918	
15,300.0	8,016.0	15,981.0	7,788.0	122.7	122.3	50.95	6,782.0	-567.0	361.9	170.4	191.44	1.890	
15,400.0	8,016.0	16,081.0	7,788.0	124.4	124.1	50.91	6,882.0	-565.4	361.6	167.6	194.07	1.863	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3C-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
15,500.0	8,016.0	16,181.0	7,788.0	126.1	125.8	50.88	6,982.0	-563.8	361.4	164.7	196.70	1.837	
15,588.7	8,016.0	16,269.6	7,788.0	127.7	127.3	50.87	7,070.6	-562.3	361.3	162.1	199.18	1.814	
15,600.0	8,016.0	16,281.0	7,788.0	127.9	127.5	50.86	7,081.9	-562.2	361.2	161.7	199.45	1.811	
15,700.0	8,016.0	16,380.9	7,788.0	129.6	129.3	50.96	7,181.9	-560.5	362.0	159.2	202.79	1.785	
15,800.0	8,016.0	16,480.9	7,788.0	131.3	131.0	51.22	7,281.9	-558.9	364.1	157.6	206.51	1.763	
15,900.0	8,016.0	16,580.8	7,788.0	133.1	132.7	51.64	7,381.8	-557.3	367.7	157.1	210.63	1.746 SF	
16,000.0	8,016.0	16,590.2	7,788.0	134.8	132.9	51.59	7,391.2	-557.2	383.4	171.2	212.18	1.807	
16,100.0	8,016.0	16,590.2	7,788.0	136.6	132.9	51.31	7,391.2	-557.2	424.0	211.1	212.90	1.991	
16,200.0	8,016.0	16,590.2	7,788.0	138.3	132.9	50.91	7,391.2	-557.2	483.2	270.0	213.21	2.266	
16,300.0	8,016.0	16,590.2	7,788.0	140.0	132.9	50.91	7,391.2	-557.2	554.6	340.0	214.57	2.585	
16,400.0	8,016.0	16,590.2	7,788.0	141.8	132.9	50.91	7,391.2	-557.2	633.8	417.8	215.93	2.935	
16,500.0	8,016.0	16,590.2	7,788.0	143.5	132.9	50.91	7,391.2	-557.2	718.2	500.9	217.29	3.305	
16,600.0	8,016.0	16,590.2	7,788.0	145.3	132.9	50.91	7,391.2	-557.2	806.1	587.5	218.65	3.687	
16,700.0	8,016.0	16,590.2	7,788.0	147.0	132.9	50.91	7,391.2	-557.2	896.6	676.6	220.01	4.076	
16,800.0	8,016.0	16,590.2	7,788.0	148.8	132.9	50.91	7,391.2	-557.2	989.0	767.6	221.37	4.468	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3D-29H-M168 - 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									
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	19.0	19.0	0.0	0.0	90.06	0.0	19.6	19.6						
100.0	100.0	119.0	119.0	0.2	0.2	90.06	0.0	19.6	19.6	19.3	0.30	64.558			
200.0	200.0	219.0	219.0	0.3	0.3	90.06	0.0	19.6	19.6	19.0	0.65	30.035			
300.0	300.0	319.0	319.0	0.5	0.5	90.06	0.0	19.6	19.6	18.6	1.00	19.570 CC, ES			
400.0	400.0	419.0	419.0	0.7	0.7	-144.23	0.0	19.6	20.3	19.0	1.35	15.031			
500.0	500.0	519.1	519.1	0.9	0.9	-148.04	-0.1	19.6	22.4	20.7	1.70	13.185			
600.0	599.9	619.8	619.7	1.0	1.0	-150.48	-1.5	17.6	24.1	22.0	2.05	11.733			
700.0	699.7	719.7	719.6	1.2	1.2	-152.65	-4.0	14.3	25.9	23.4	2.41	10.740			
800.0	799.4	819.7	819.5	1.4	1.4	-155.99	-6.5	11.1	29.2	26.5	2.76	10.589			
900.0	898.9	919.5	919.2	1.7	1.6	-159.70	-9.0	7.8	34.3	31.2	3.11	11.031			
1,000.0	998.3	1,019.3	1,018.9	1.9	1.8	-163.16	-11.5	4.5	41.2	37.7	3.46	11.905			
1,100.0	1,097.4	1,118.8	1,118.4	2.2	1.9	-166.12	-14.0	1.3	49.8	46.0	3.80	13.101			
1,200.0	1,196.3	1,218.3	1,217.7	2.5	2.1	-168.54	-16.4	-2.0	60.3	56.1	4.14	14.540			
1,300.0	1,295.0	1,317.6	1,316.9	2.8	2.3	-170.41	-18.9	-5.2	72.0	67.5	4.49	16.031			
1,400.0	1,393.7	1,416.8	1,416.1	3.1	2.5	-171.77	-21.4	-8.5	83.8	79.0	4.84	17.325			
1,500.0	1,492.4	1,516.1	1,515.3	3.4	2.7	-172.79	-23.9	-11.7	95.6	90.5	5.18	18.452			
1,600.0	1,591.1	1,615.4	1,614.5	3.7	2.9	-173.59	-26.3	-15.0	107.5	102.0	5.53	19.441			
1,700.0	1,689.8	1,714.7	1,713.7	4.1	3.1	-174.23	-28.8	-18.2	119.4	113.5	5.88	20.316			
1,800.0	1,788.6	1,814.0	1,812.9	4.4	3.2	-174.75	-31.3	-21.5	131.3	125.1	6.22	21.095			
1,900.0	1,887.3	1,913.3	1,912.1	4.7	3.4	-175.19	-33.7	-24.7	143.2	136.6	6.57	21.793			
2,000.0	1,986.0	2,012.5	2,011.3	5.0	3.6	-175.56	-36.2	-28.0	155.1	148.2	6.92	22.422			
2,100.0	2,084.7	2,111.8	2,110.5	5.3	3.8	-175.87	-38.7	-31.2	167.0	159.8	7.26	22.991			
2,200.0	2,183.4	2,211.1	2,209.7	5.7	4.0	-176.15	-41.2	-34.5	179.0	171.3	7.61	23.509			
2,300.0	2,282.1	2,310.4	2,308.9	6.0	4.2	-176.39	-43.6	-37.7	190.9	182.9	7.96	23.982			
2,400.0	2,380.8	2,409.7	2,408.1	6.3	4.4	-176.60	-46.1	-41.0	202.8	194.5	8.31	24.416			
2,500.0	2,479.5	2,509.0	2,507.3	6.6	4.6	-176.79	-48.6	-44.2	214.7	206.1	8.65	24.815			
2,600.0	2,578.2	2,608.2	2,606.5	7.0	4.7	-176.95	-51.0	-47.5	226.7	217.7	9.00	25.183			
2,700.0	2,676.9	2,707.5	2,705.7	7.3	4.9	-177.11	-53.5	-50.7	238.6	229.3	9.35	25.525			
2,800.0	2,775.6	2,806.8	2,804.9	7.6	5.1	-177.24	-56.0	-54.0	250.6	240.9	9.70	25.842			
2,900.0	2,874.3	2,906.1	2,904.1	8.0	5.3	-177.37	-58.5	-57.2	262.5	252.5	10.04	26.137			
3,000.0	2,973.0	3,005.4	3,003.3	8.3	5.5	-177.48	-60.9	-60.5	274.4	264.0	10.39	26.412			
3,100.0	3,071.8	3,104.7	3,102.5	8.6	5.7	-177.59	-63.4	-63.7	286.4	275.6	10.74	26.670			
3,200.0	3,170.5	3,203.9	3,201.7	8.9	5.9	-177.68	-65.9	-67.0	298.3	287.2	11.09	26.911			
3,300.0	3,269.2	3,303.2	3,300.9	9.3	6.1	-177.77	-68.3	-70.2	310.3	298.8	11.43	27.138			
3,400.0	3,367.9	3,402.5	3,400.1	9.6	6.2	-177.85	-70.8	-73.5	322.2	310.4	11.78	27.351			
3,500.0	3,466.6	3,501.8	3,499.3	9.9	6.4	-177.93	-73.3	-76.7	334.1	322.0	12.13	27.553			
3,600.0	3,565.3	3,601.1	3,598.5	10.3	6.6	-178.00	-75.8	-80.0	346.1	333.6	12.47	27.743			
3,700.0	3,664.0	3,700.4	3,697.7	10.6	6.8	-178.06	-78.2	-83.2	358.0	345.2	12.82	27.923			
3,800.0	3,762.7	3,799.6	3,796.9	10.9	7.0	-178.13	-80.7	-86.5	370.0	356.8	13.17	28.093			
3,900.0	3,861.4	3,898.9	3,896.1	11.3	7.2	-178.18	-83.2	-89.7	381.9	368.4	13.52	28.255			
4,000.0	3,960.1	3,998.2	3,995.3	11.6	7.4	-178.24	-85.6	-93.0	393.9	380.0	13.86	28.408			
4,100.0	4,058.8	4,097.5	4,094.5	11.9	7.5	-178.29	-88.1	-96.2	405.8	391.6	14.21	28.554			
4,200.0	4,157.5	4,196.8	4,193.7	12.2	7.7	-178.34	-90.6	-99.5	417.8	403.2	14.56	28.693			
4,300.0	4,256.2	4,296.1	4,292.9	12.6	7.9	-178.38	-93.1	-102.7	429.7	414.8	14.91	28.826			
4,400.0	4,355.0	4,395.3	4,392.1	12.9	8.1	-178.43	-95.5	-106.0	441.7	426.4	15.25	28.953			
4,500.0	4,453.7	4,494.6	4,491.3	13.2	8.3	-178.47	-98.0	-109.2	453.6	438.0	15.60	29.074			
4,600.0	4,552.4	4,593.9	4,590.5	13.6	8.5	-178.51	-100.5	-112.5	465.6	449.6	15.95	29.189			
4,700.0	4,651.1	4,693.2	4,689.7	13.9	8.7	-178.54	-102.9	-115.7	477.5	461.2	16.30	29.300			
4,800.0	4,749.8	4,792.5	4,788.9	14.2	8.9	-178.58	-105.4	-119.0	489.5	472.8	16.64	29.406			
4,900.0	4,848.5	4,891.8	4,888.1	14.6	9.0	-178.61	-107.9	-122.2	501.4	484.4	16.99	29.508			
5,000.0	4,947.2	4,991.0	4,987.3	14.9	9.2	-178.64	-110.4	-125.5	513.4	496.0	17.34	29.606			
5,100.0	5,045.9	5,090.3	5,086.5	15.2	9.4	-178.67	-112.8	-128.7	525.3	507.6	17.69	29.700			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3D-29H-M168 - 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		
5,200.0	5,144.6	5,189.6	5,185.7	15.6	9.6	-178.70	-115.3	-132.0	537.3	519.2	18.03	29.790		
5,300.0	5,243.3	5,288.9	5,284.9	15.9	9.8	-178.73	-117.8	-135.2	549.2	530.8	18.38	29.877		
5,400.0	5,342.0	5,388.2	5,384.1	16.2	10.0	-178.76	-120.2	-138.5	561.2	542.4	18.73	29.960		
5,500.0	5,440.7	5,487.5	5,483.3	16.5	10.2	-178.78	-122.7	-141.7	573.1	554.0	19.08	30.041		
5,600.0	5,539.4	5,586.7	5,582.5	16.9	10.4	-178.81	-125.2	-145.0	585.0	565.6	19.42	30.119		
5,700.0	5,638.2	5,686.0	5,681.7	17.2	10.5	-178.83	-127.7	-148.2	597.0	577.2	19.77	30.194		
5,800.0	5,736.9	5,785.3	5,780.9	17.5	10.7	-178.85	-130.1	-151.5	608.9	588.8	20.12	30.266		
5,900.0	5,835.6	5,884.6	5,880.1	17.9	10.9	-178.88	-132.6	-154.7	620.9	600.4	20.47	30.336		
6,000.0	5,934.3	5,983.9	5,979.3	18.2	11.1	-178.90	-135.1	-158.0	632.8	612.0	20.81	30.404		
6,100.0	6,033.0	6,083.2	6,078.5	18.5	11.3	-178.92	-137.6	-161.2	644.8	623.6	21.16	30.469		
6,200.0	6,131.7	6,182.4	6,177.7	18.9	11.5	-178.94	-140.0	-164.5	656.7	635.2	21.51	30.532		
6,300.0	6,230.4	6,281.7	6,276.9	19.2	11.7	-178.95	-142.5	-167.7	668.7	646.8	21.86	30.594		
6,400.0	6,329.1	6,381.0	6,376.1	19.5	11.9	-178.97	-145.0	-171.0	680.6	658.4	22.20	30.653		
6,500.0	6,427.8	6,480.3	6,475.3	19.9	12.0	-178.99	-147.4	-174.2	692.6	670.0	22.55	30.710		
6,600.0	6,526.5	6,579.6	6,574.5	20.2	12.2	-179.01	-149.9	-177.5	704.5	681.6	22.90	30.766		
6,700.0	6,625.2	6,678.9	6,673.7	20.5	12.4	-179.02	-152.4	-180.7	716.5	693.3	23.25	30.820		
6,800.0	6,723.9	6,778.1	6,772.9	20.9	12.6	-179.04	-154.9	-184.0	728.4	704.9	23.60	30.873		
6,900.0	6,822.6	6,877.4	6,872.1	21.2	12.8	-179.05	-157.3	-187.2	740.4	716.5	23.94	30.924		
7,000.0	6,921.4	6,974.1	6,968.7	21.5	13.0	-179.07	-159.7	-190.4	752.4	728.1	24.29	30.980		
7,100.0	7,020.1	7,045.1	7,039.7	21.8	13.1	-179.24	-158.9	-192.7	766.5	741.9	24.58	31.180		
7,200.0	7,118.8	7,114.9	7,109.2	22.2	13.2	-179.66	-153.8	-195.0	784.3	759.4	24.88	31.524		
7,300.0	7,217.5	7,183.0	7,176.6	22.5	13.3	179.71	-144.7	-197.1	805.7	780.5	25.18	32.003		
7,400.0	7,316.2	7,249.0	7,241.4	22.8	13.3	178.91	-132.1	-199.2	830.9	805.4	25.48	32.604		
7,500.0	7,414.9	7,300.0	7,290.9	23.2	13.4	164.46	-119.8	-200.8	859.7	833.9	25.81	33.310		
7,600.0	7,514.0	7,376.5	7,363.9	23.3	13.5	95.34	-97.3	-203.2	884.3	858.1	26.23	33.715		
7,700.0	7,611.0	7,441.3	7,424.5	23.4	13.6	70.16	-74.5	-205.1	901.3	875.0	26.34	34.214		
7,800.0	7,703.0	7,500.0	7,478.2	23.3	13.6	61.49	-50.9	-206.8	910.2	884.0	26.14	34.825		
7,900.0	7,787.3	7,571.6	7,542.0	23.1	13.8	58.12	-18.4	-208.8	910.5	884.7	25.79	35.305		
8,000.0	7,861.3	7,636.2	7,597.7	22.8	13.9	57.37	14.3	-210.6	902.8	877.3	25.44	35.489		
8,100.0	7,922.7	7,700.0	7,650.8	22.6	14.1	58.42	49.6	-212.3	887.4	862.1	25.32	35.046		
8,200.0	7,969.6	7,761.9	7,700.3	22.3	14.2	60.97	86.6	-213.8	865.2	839.6	25.60	33.796		
8,300.0	8,000.7	7,821.7	7,746.3	22.2	14.5	64.86	124.9	-215.2	837.5	811.2	26.29	31.857		
8,400.0	8,015.1	7,878.5	7,788.0	22.1	14.7	69.93	163.4	-216.5	806.1	778.9	27.26	29.574		
8,500.0	8,016.0	7,929.2	7,823.3	22.1	15.0	73.45	199.7	-217.6	774.8	746.8	28.03	27.644		
8,600.0	8,016.0	7,983.8	7,858.6	22.3	15.3	76.06	241.4	-218.7	750.0	721.1	28.89	25.956		
8,700.0	8,016.0	8,050.0	7,896.8	22.6	15.7	78.98	295.4	-219.8	731.8	701.7	30.07	24.333		
8,800.0	8,016.0	8,115.7	7,929.7	23.1	16.2	81.54	352.3	-220.8	719.3	687.9	31.44	22.877		
8,900.0	8,016.0	8,193.4	7,961.6	23.6	16.9	84.07	423.1	-221.7	711.5	678.4	33.11	21.487		
9,000.0	8,016.0	8,278.3	7,987.5	24.3	17.8	86.15	503.8	-222.4	707.0	672.0	35.04	20.180		
9,100.0	8,016.0	8,368.5	8,004.4	25.1	18.8	87.51	592.4	-222.8	704.7	667.5	37.18	18.953		
9,200.0	8,016.0	8,462.0	8,010.0	26.0	19.9	87.97	685.7	-222.8	703.6	664.1	39.50	17.812		
9,300.0	8,016.0	8,562.0	8,010.0	26.9	21.2	87.96	785.7	-222.6	702.9	660.8	42.05	16.716		
9,400.0	8,016.0	8,662.0	8,010.0	28.0	22.5	87.96	885.7	-222.4	702.2	657.5	44.72	15.702		
9,500.0	8,016.0	8,762.0	8,010.0	29.1	23.9	87.96	985.7	-222.2	701.5	654.0	47.50	14.769		
9,600.0	8,016.0	8,862.0	8,010.0	30.3	25.3	87.96	1,085.7	-222.0	700.9	650.5	50.37	13.914		
9,700.0	8,016.0	8,962.0	8,010.0	31.5	26.8	87.96	1,185.7	-221.8	700.2	646.9	53.32	13.133		
9,800.0	8,016.0	9,062.0	8,010.0	32.8	28.3	87.95	1,285.7	-221.6	699.5	643.2	56.33	12.419		
9,900.0	8,016.0	9,162.0	8,010.0	34.1	29.9	87.95	1,385.7	-221.4	698.8	639.4	59.39	11.767		
10,000.0	8,016.0	9,262.0	8,010.0	35.5	31.4	87.95	1,485.7	-221.2	698.1	635.6	62.50	11.170		
10,100.0	8,016.0	9,362.0	8,010.0	36.8	33.0	87.95	1,585.7	-221.0	697.5	631.8	65.65	10.624		
10,200.0	8,016.0	9,462.0	8,010.0	38.3	34.6	87.95	1,685.7	-220.8	696.8	628.0	68.84	10.122		
10,300.0	8,016.0	9,562.0	8,010.0	39.7	36.2	87.94	1,785.7	-220.6	696.1	624.1	72.05	9.661		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3D-29H-M168 - 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		
10,400.0	8,016.0	9,662.0	8,010.0	41.2	37.8	87.94	1,885.7	-220.4	695.4	620.2	75.29	9.237	
10,500.0	8,016.0	9,762.0	8,010.0	42.7	39.5	87.94	1,985.7	-220.2	694.8	616.2	78.56	8.844	
10,600.0	8,016.0	9,862.0	8,010.0	44.2	41.1	87.94	2,085.7	-220.0	694.1	612.3	81.84	8.481	
10,700.0	8,016.0	9,962.0	8,010.0	45.7	42.8	87.94	2,185.7	-219.8	693.4	608.3	85.14	8.144	
10,800.0	8,016.0	10,062.0	8,010.0	47.3	44.4	87.93	2,285.7	-219.6	692.7	604.3	88.46	7.831	
10,900.0	8,016.0	10,162.0	8,010.0	48.8	46.1	87.93	2,385.6	-219.4	692.1	600.3	91.79	7.540	
11,000.0	8,016.0	10,262.0	8,010.0	50.4	47.8	87.93	2,485.6	-219.2	691.4	596.3	95.13	7.268	
11,100.0	8,016.0	10,362.0	8,010.0	52.0	49.4	87.93	2,585.6	-219.0	690.7	592.2	98.49	7.013	
11,200.0	8,016.0	10,462.0	8,010.0	53.6	51.1	87.93	2,685.6	-218.8	690.0	588.2	101.85	6.775	
11,300.0	8,016.0	10,562.0	8,010.0	55.2	52.8	87.92	2,785.6	-218.6	689.4	584.1	105.23	6.551	
11,400.0	8,016.0	10,662.0	8,010.0	56.8	54.5	87.92	2,885.6	-218.4	688.7	580.1	108.61	6.341	
11,500.0	8,016.0	10,762.0	8,010.0	58.4	56.2	87.92	2,985.6	-218.2	688.0	576.0	112.00	6.143	
11,600.0	8,016.0	10,862.0	8,010.0	60.0	57.9	87.92	3,085.6	-218.0	687.3	571.9	115.40	5.956	
11,700.0	8,016.0	10,962.0	8,010.0	61.7	59.6	87.92	3,185.6	-217.8	686.7	567.9	118.80	5.780	
11,800.0	8,016.0	11,062.0	8,010.0	63.3	61.3	87.91	3,285.6	-217.6	686.0	563.8	122.21	5.613	
11,900.0	8,016.0	11,162.0	8,010.0	65.0	63.0	87.91	3,385.6	-217.4	685.3	559.7	125.62	5.455	
12,000.0	8,016.0	11,262.0	8,010.0	66.6	64.7	87.91	3,485.6	-217.2	684.6	555.6	129.04	5.306	
12,100.0	8,016.0	11,362.0	8,010.0	68.3	66.4	87.91	3,585.6	-217.0	684.0	551.5	132.47	5.163	
12,200.0	8,016.0	11,462.0	8,010.0	69.9	68.2	87.90	3,685.6	-216.8	683.3	547.4	135.90	5.028	
12,300.0	8,016.0	11,562.0	8,010.0	71.6	69.9	87.90	3,785.6	-216.6	682.6	543.3	139.33	4.899	
12,400.0	8,016.0	11,662.0	8,010.0	73.3	71.6	87.90	3,885.6	-216.4	681.9	539.2	142.76	4.777	
12,500.0	8,016.0	11,762.0	8,010.0	75.0	73.3	87.90	3,985.6	-216.2	681.3	535.1	146.20	4.660	
12,600.0	8,016.0	11,862.0	8,010.0	76.6	75.0	87.90	4,085.6	-216.1	680.6	531.0	149.64	4.548	
12,700.0	8,016.0	11,961.9	8,010.0	78.3	76.8	87.89	4,185.6	-215.9	679.9	526.8	153.09	4.441	
12,800.0	8,016.0	12,061.9	8,010.0	80.0	78.5	87.89	4,285.6	-215.7	679.2	522.7	156.54	4.339	
12,900.0	8,016.0	12,161.9	8,010.0	81.7	80.2	87.89	4,385.6	-215.5	678.6	518.6	159.99	4.241	
13,000.0	8,016.0	12,261.9	8,010.0	83.4	81.9	87.89	4,485.6	-215.3	677.3	514.1	163.21	4.150	
13,100.0	8,016.0	12,361.9	8,010.0	85.1	83.7	87.88	4,585.6	-215.1	675.6	508.9	166.67	4.053	
13,200.0	8,016.0	12,461.9	8,010.0	86.8	85.4	87.87	4,685.6	-214.9	673.9	503.7	170.12	3.961	
13,300.0	8,016.0	12,561.9	8,010.0	88.4	87.1	87.87	4,785.5	-214.7	672.1	498.6	173.58	3.872	
13,400.0	8,016.0	12,661.9	8,010.0	90.1	88.9	87.86	4,885.5	-214.5	670.4	493.4	177.04	3.787	
13,500.0	8,016.0	12,761.9	8,010.0	91.8	90.6	87.86	4,985.5	-214.3	668.7	488.2	180.50	3.705	
13,600.0	8,016.0	12,861.8	8,010.0	93.5	92.3	87.85	5,085.5	-214.1	667.0	483.0	183.96	3.626	
13,700.0	8,016.0	12,961.8	8,010.0	95.2	94.1	87.85	5,185.5	-213.9	665.2	477.8	187.43	3.549	
13,800.0	8,016.0	13,061.8	8,010.0	97.0	95.8	87.84	5,285.5	-213.7	663.5	472.6	190.89	3.476	
13,900.0	8,016.0	13,161.8	8,010.0	98.7	97.5	87.84	5,385.5	-213.5	661.8	467.4	194.36	3.405	
14,000.0	8,016.0	13,261.8	8,010.0	100.4	99.3	87.83	5,485.4	-213.3	660.1	462.3	197.83	3.337	
14,100.0	8,016.0	13,361.8	8,010.0	102.1	101.0	87.82	5,585.4	-213.1	658.4	457.1	201.30	3.271	
14,200.0	8,016.0	13,461.8	8,010.0	103.8	102.7	87.82	5,685.4	-212.9	656.6	451.9	204.77	3.207	
14,300.0	8,016.0	13,561.7	8,010.0	105.5	104.5	87.81	5,785.4	-212.7	654.9	446.7	208.24	3.145	
14,400.0	8,016.0	13,661.7	8,010.0	107.2	106.2	87.81	5,885.4	-212.5	653.2	441.5	211.71	3.085	
14,500.0	8,016.0	13,761.7	8,010.0	108.9	108.0	87.80	5,985.4	-212.3	651.5	436.3	215.19	3.027	
14,600.0	8,016.0	13,861.7	8,010.0	110.6	109.7	87.80	6,085.3	-212.1	649.8	431.1	218.66	2.971	
14,700.0	8,016.0	13,961.7	8,010.0	112.4	111.4	87.79	6,185.3	-211.9	648.0	425.9	222.14	2.917	
14,800.0	8,016.0	14,061.7	8,010.0	114.1	113.2	87.78	6,285.3	-211.7	646.3	420.7	225.61	2.865	
14,900.0	8,016.0	14,161.7	8,010.0	115.8	114.9	87.78	6,385.3	-211.5	644.6	415.5	229.09	2.814	
15,000.0	8,016.0	14,261.6	8,010.0	117.5	116.7	87.77	6,485.3	-211.3	642.9	410.3	232.57	2.764	
15,100.0	8,016.0	14,361.6	8,010.0	119.2	118.4	87.77	6,585.3	-211.1	641.1	405.1	236.05	2.716	
15,200.0	8,016.0	14,461.6	8,010.0	121.0	120.1	87.76	6,685.3	-210.9	639.4	399.9	239.53	2.670	
15,300.0	8,016.0	14,561.6	8,010.0	122.7	121.9	87.75	6,785.2	-210.7	637.7	394.7	243.01	2.624	
15,400.0	8,016.0	14,661.6	8,010.0	124.4	123.6	87.75	6,885.2	-210.5	636.0	389.5	246.49	2.580	
15,500.0	8,016.0	14,761.6	8,010.0	126.1	125.4	87.74	6,985.2	-210.3	634.3	384.3	249.97	2.537	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3D-29H-M168 - 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		
15,600.0	8,016.0	14,861.5	8,010.0	127.9	127.1	87.74	7,085.2	-210.1	632.6	379.0	253.56	2.495		
15,671.8	8,016.0	14,933.3	8,010.0	129.1	128.4	87.73	7,157.0	-210.0	632.2	375.8	256.32	2.466		
15,700.0	8,016.0	14,961.5	8,010.0	129.6	128.9	87.73	7,185.2	-209.9	632.2	374.8	257.39	2.456		
15,800.0	8,016.0	15,061.5	8,010.0	131.3	130.6	87.74	7,285.2	-209.7	633.6	372.4	261.15	2.426		
15,900.0	8,016.0	15,161.5	8,010.0	133.1	132.3	87.75	7,385.1	-209.6	636.7	371.9	264.83	2.404		
16,000.0	8,016.0	15,261.4	8,010.0	134.8	134.1	87.76	7,485.0	-209.4	641.5	373.1	268.43	2.390		
16,100.0	8,016.0	15,361.1	8,010.0	136.6	135.8	87.78	7,584.8	-209.2	648.1	376.2	271.95	2.383 SF		
16,200.0	8,016.0	15,460.8	8,010.0	138.3	137.6	87.81	7,684.5	-209.0	656.5	381.1	275.40	2.384		
16,300.0	8,016.0	15,560.4	8,010.0	140.0	139.3	87.84	7,784.0	-208.8	665.4	386.6	278.88	2.386		
16,400.0	8,016.0	15,660.0	8,010.0	141.8	141.0	87.87	7,883.6	-208.6	674.4	392.1	282.36	2.389		
16,500.0	8,016.0	15,759.6	8,010.0	143.5	142.8	87.90	7,983.2	-208.4	683.4	397.6	285.84	2.391		
16,600.0	8,016.0	15,859.2	8,010.0	145.3	144.5	87.92	8,082.8	-208.2	692.4	403.1	289.32	2.393		
16,700.0	8,016.0	15,958.8	8,010.0	147.0	146.3	87.95	8,182.4	-208.0	701.4	408.6	292.81	2.396		
16,800.0	8,016.0	16,058.4	8,010.0	148.8	148.0	87.98	8,282.0	-207.8	710.4	414.1	296.29	2.398		
16,900.0	8,016.0	16,158.0	8,010.0	150.5	149.7	88.00	8,381.6	-207.6	719.4	419.6	299.77	2.400		
17,000.0	8,016.0	16,257.6	8,010.0	152.3	151.5	88.03	8,481.2	-207.4	728.4	425.1	303.26	2.402		
17,092.8	8,016.0	16,350.0	8,010.0	153.9	153.1	88.05	8,573.6	-207.2	736.7	430.3	306.49	2.404		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3E-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		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	30.8	30.8					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	30.8	30.8	30.5	0.30	101.448		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	30.8	30.8	30.2	0.65	47.198		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	30.8	30.8	29.8	1.00	30.752 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	-143.71	0.0	30.8	31.5	30.2	1.35	23.321		
500.0	500.0	499.9	499.9	0.9	0.9	-144.85	-0.9	30.9	33.7	32.0	1.70	19.787		
600.0	599.9	599.9	599.8	1.0	1.0	-144.68	-3.5	31.0	37.3	35.3	2.06	18.141		
700.0	699.7	699.7	699.6	1.2	1.2	-143.53	-7.8	31.3	42.5	40.0	2.42	17.526		
800.0	799.4	799.4	799.1	1.4	1.4	-141.83	-13.9	31.8	49.1	46.3	2.80	17.518 SF		
900.0	898.9	899.0	898.3	1.7	1.6	-139.90	-21.7	32.3	57.4	54.2	3.21	17.880		
1,000.0	998.3	998.3	997.2	1.9	1.8	-137.95	-31.2	32.9	67.2	63.5	3.64	18.463		
1,100.0	1,097.4	1,097.4	1,095.7	2.2	2.1	-136.11	-42.3	33.7	78.6	74.5	4.10	19.169		
1,200.0	1,196.3	1,196.3	1,193.7	2.5	2.3	-134.43	-55.1	34.6	91.7	87.1	4.60	19.930		
1,300.0	1,295.0	1,294.8	1,291.2	2.8	2.6	-132.79	-69.6	35.6	106.0	100.8	5.13	20.653		
1,400.0	1,393.7	1,393.1	1,388.2	3.1	2.9	-130.79	-85.7	36.7	120.8	115.1	5.70	21.209		
1,500.0	1,492.4	1,491.2	1,484.6	3.4	3.2	-128.55	-103.4	37.9	136.3	130.0	6.29	21.658		
1,600.0	1,591.1	1,588.9	1,580.4	3.7	3.6	-126.17	-122.6	39.2	152.5	145.6	6.92	22.050		
1,700.0	1,689.8	1,686.2	1,675.4	4.1	4.0	-123.73	-143.4	40.6	169.5	162.0	7.56	22.421		
1,800.0	1,788.6	1,783.1	1,769.7	4.4	4.4	-121.28	-165.8	42.1	187.5	179.3	8.22	22.808		
1,900.0	1,887.3	1,881.1	1,864.9	4.7	4.8	-119.04	-189.1	43.7	206.1	197.3	8.89	23.195		
2,000.0	1,986.0	1,979.0	1,960.0	5.0	5.2	-117.17	-212.3	45.3	225.0	215.5	9.55	23.561		
2,100.0	2,084.7	2,077.0	2,055.1	5.3	5.6	-115.60	-235.6	46.9	244.1	233.9	10.21	23.904		
2,200.0	2,183.4	2,175.0	2,150.3	5.7	6.1	-114.25	-258.9	48.5	263.3	252.4	10.87	24.224		
2,300.0	2,282.1	2,272.9	2,245.4	6.0	6.5	-113.08	-282.2	50.1	282.6	271.1	11.53	24.522		
2,400.0	2,380.8	2,370.9	2,340.6	6.3	6.9	-112.07	-305.5	51.7	302.1	289.9	12.18	24.799		
2,500.0	2,479.5	2,468.8	2,435.7	6.6	7.3	-111.17	-328.8	53.3	321.6	308.7	12.83	25.056		
2,600.0	2,578.2	2,566.8	2,530.8	7.0	7.8	-110.38	-352.0	54.9	341.2	327.7	13.49	25.295		
2,700.0	2,676.9	2,664.8	2,626.0	7.3	8.2	-109.68	-375.3	56.5	360.8	346.7	14.14	25.518		
2,800.0	2,775.6	2,762.7	2,721.1	7.6	8.6	-109.04	-398.6	58.1	380.5	365.7	14.79	25.726		
2,900.0	2,874.3	2,860.7	2,816.3	8.0	9.1	-108.47	-421.9	59.6	400.2	384.8	15.44	25.919		
3,000.0	2,973.0	2,958.6	2,911.4	8.3	9.5	-107.96	-445.2	61.2	420.0	403.9	16.09	26.100		
3,100.0	3,071.8	3,056.6	3,006.5	8.6	9.9	-107.49	-468.5	62.8	439.8	423.0	16.74	26.270		
3,200.0	3,170.5	3,154.6	3,101.7	8.9	10.4	-107.06	-491.7	64.4	459.6	442.2	17.39	26.429		
3,300.0	3,269.2	3,252.5	3,196.8	9.3	10.8	-106.66	-515.0	66.0	479.4	461.4	18.04	26.579		
3,400.0	3,367.9	3,350.5	3,292.0	9.6	11.2	-106.30	-538.3	67.6	499.3	480.6	18.69	26.719		
3,500.0	3,466.6	3,448.4	3,387.1	9.9	11.7	-105.96	-561.6	69.2	519.2	499.8	19.33	26.852		
3,600.0	3,565.3	3,546.4	3,482.2	10.3	12.1	-105.65	-584.9	70.8	539.1	519.1	19.98	26.977		
3,700.0	3,664.0	3,644.4	3,577.4	10.6	12.6	-105.37	-608.2	72.4	559.0	538.3	20.63	27.095		
3,800.0	3,762.7	3,742.3	3,672.5	10.9	13.0	-105.10	-631.4	74.0	578.9	557.6	21.28	27.207		
3,900.0	3,861.4	3,840.3	3,767.7	11.3	13.4	-104.85	-654.7	75.6	598.8	576.9	21.92	27.313		
4,000.0	3,960.1	3,938.3	3,862.8	11.6	13.9	-104.61	-678.0	77.1	618.8	596.2	22.57	27.413		
4,100.0	4,058.8	4,036.2	3,957.9	11.9	14.3	-104.39	-701.3	78.7	638.7	615.5	23.22	27.509		
4,200.0	4,157.5	4,134.2	4,053.1	12.2	14.8	-104.18	-724.6	80.3	658.7	634.8	23.87	27.600		
4,300.0	4,256.2	4,232.1	4,148.2	12.6	15.2	-103.99	-747.9	81.9	678.6	654.1	24.51	27.686		
4,400.0	4,355.0	4,330.1	4,243.4	12.9	15.6	-103.81	-771.1	83.5	698.6	673.5	25.16	27.769		
4,500.0	4,453.7	4,428.1	4,338.5	13.2	16.1	-103.63	-794.4	85.1	718.6	692.8	25.80	27.847		
4,600.0	4,552.4	4,526.0	4,433.6	13.6	16.5	-103.47	-817.7	86.7	738.6	712.1	26.45	27.923		
4,700.0	4,651.1	4,624.0	4,528.8	13.9	17.0	-103.31	-841.0	88.3	758.6	731.5	27.10	27.994		
4,800.0	4,749.8	4,721.9	4,623.9	14.2	17.4	-103.17	-864.3	89.9	778.6	750.8	27.74	28.063		
4,900.0	4,848.5	4,819.9	4,719.1	14.6	17.8	-103.03	-887.6	91.5	798.6	770.2	28.39	28.129		
5,000.0	4,947.2	4,917.9	4,814.2	14.9	18.3	-102.89	-910.8	93.1	818.6	789.5	29.04	28.192		
5,100.0	5,045.9	5,015.8	4,909.3	15.2	18.7	-102.77	-934.1	94.7	838.6	808.9	29.68	28.253		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design				S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3E-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							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					
5,200.0	5,144.6	5,113.8	5,004.5	15.6	19.2	-102.65	-957.4	96.2	858.6	828.3	30.33	28.311					
5,300.0	5,243.3	5,211.7	5,099.6	15.9	19.6	-102.53	-980.7	97.8	878.6	847.7	30.97	28.367					
5,400.0	5,342.0	5,309.7	5,194.8	16.2	20.0	-102.42	-1,004.0	99.4	898.6	867.0	31.62	28.421					
5,500.0	5,440.7	5,407.7	5,289.9	16.5	20.5	-102.32	-1,027.3	101.0	918.7	886.4	32.27	28.473					
5,600.0	5,539.4	5,505.6	5,385.1	16.9	20.9	-102.22	-1,050.5	102.6	938.7	905.8	32.91	28.523					
5,700.0	5,638.2	5,603.6	5,480.2	17.2	21.4	-102.12	-1,073.8	104.2	958.7	925.2	33.56	28.571					
5,800.0	5,736.9	5,701.5	5,575.3	17.5	21.8	-102.03	-1,097.1	105.8	978.8	944.6	34.20	28.617					
5,900.0	5,835.6	5,799.5	5,670.5	17.9	22.2	-101.94	-1,120.4	107.4	998.8	964.0	34.85	28.662					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3F-29H-M168 - 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	39.2	39.2					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	39.2	39.2	38.9	0.30	129.115		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	39.2	39.2	38.6	0.65	60.070		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	39.2	39.2	38.2	1.00	39.140 CC, ES		
400.0	400.0	399.8	399.8	0.7	0.7	-142.32	-0.9	39.5	40.2	38.8	1.35	29.732		
500.0	500.0	499.5	499.5	0.9	0.9	-141.14	-3.3	40.3	43.1	41.4	1.70	25.270		
600.0	599.9	599.1	599.0	1.0	1.0	-139.49	-7.5	41.6	48.0	45.9	2.07	23.201		
700.0	699.7	698.5	698.2	1.2	1.2	-137.67	-13.2	43.5	54.8	52.4	2.44	22.447 SF		
800.0	799.4	797.7	797.1	1.4	1.4	-135.90	-20.6	45.9	63.7	60.9	2.84	22.467		
900.0	898.9	896.5	895.5	1.7	1.7	-134.30	-29.5	48.8	74.6	71.4	3.25	22.951		
1,000.0	998.3	995.1	993.4	1.9	1.9	-132.91	-40.1	52.2	87.6	83.9	3.69	23.708		
1,100.0	1,097.4	1,093.2	1,090.6	2.2	2.2	-131.73	-52.2	56.1	102.5	98.3	4.16	24.618		
1,200.0	1,196.3	1,190.8	1,187.2	2.5	2.5	-130.73	-65.8	60.6	119.4	114.7	4.66	25.599		
1,300.0	1,295.0	1,287.9	1,283.1	2.8	2.8	-129.83	-80.8	65.5	137.9	132.7	5.19	26.564		
1,400.0	1,393.7	1,384.7	1,378.2	3.1	3.1	-128.66	-97.4	70.8	157.3	151.6	5.74	27.399		
1,500.0	1,492.4	1,481.0	1,472.7	3.4	3.4	-127.29	-115.4	76.7	177.7	171.4	6.32	28.145		
1,600.0	1,591.1	1,576.9	1,566.3	3.7	3.8	-125.82	-134.8	83.0	199.1	192.2	6.91	28.837		
1,700.0	1,689.8	1,672.1	1,659.0	4.1	4.2	-124.29	-155.5	89.7	221.6	214.1	7.51	29.512		
1,800.0	1,788.6	1,769.1	1,753.2	4.4	4.6	-122.84	-177.5	96.9	244.7	236.6	8.12	30.134		
1,900.0	1,887.3	1,866.2	1,847.5	4.7	5.0	-121.63	-199.6	104.0	268.0	259.2	8.73	30.679		
2,000.0	1,986.0	1,963.3	1,941.8	5.0	5.5	-120.62	-221.6	111.2	291.3	282.0	9.35	31.159		
2,100.0	2,084.7	2,060.4	2,036.1	5.3	5.9	-119.76	-243.6	118.4	314.7	304.8	9.96	31.586		
2,200.0	2,183.4	2,157.5	2,130.4	5.7	6.3	-119.01	-265.7	125.5	338.2	327.6	10.58	31.968		
2,300.0	2,282.1	2,254.6	2,224.7	6.0	6.7	-118.37	-287.7	132.7	361.8	350.6	11.20	32.310		
2,400.0	2,380.8	2,351.8	2,319.1	6.3	7.2	-117.80	-309.7	139.8	385.3	373.5	11.81	32.620		
2,500.0	2,479.5	2,448.9	2,413.4	6.6	7.6	-117.30	-331.8	147.0	408.9	396.5	12.43	32.900		
2,600.0	2,578.2	2,546.0	2,507.7	7.0	8.0	-116.85	-353.8	154.2	432.6	419.5	13.05	33.156		
2,700.0	2,676.9	2,643.1	2,602.0	7.3	8.5	-116.45	-375.8	161.3	456.2	442.6	13.66	33.389		
2,800.0	2,775.6	2,740.2	2,696.3	7.6	8.9	-116.08	-397.8	168.5	479.9	465.6	14.28	33.604		
2,900.0	2,874.3	2,837.3	2,790.6	8.0	9.3	-115.76	-419.9	175.6	503.6	488.7	14.90	33.801		
3,000.0	2,973.0	2,934.4	2,884.9	8.3	9.8	-115.46	-441.9	182.8	527.3	511.8	15.52	33.983		
3,100.0	3,071.8	3,031.6	2,979.2	8.6	10.2	-115.19	-463.9	189.9	551.0	534.9	16.13	34.152		
3,200.0	3,170.5	3,128.7	3,073.6	8.9	10.6	-114.94	-486.0	197.1	574.7	558.0	16.75	34.309		
3,300.0	3,269.2	3,225.8	3,167.9	9.3	11.1	-114.71	-508.0	204.3	598.5	581.1	17.37	34.456		
3,400.0	3,367.9	3,322.9	3,262.2	9.6	11.5	-114.49	-530.0	211.4	622.2	604.2	17.99	34.592		
3,500.0	3,466.6	3,420.0	3,356.5	9.9	11.9	-114.30	-552.1	218.6	646.0	627.4	18.61	34.720		
3,600.0	3,565.3	3,517.1	3,450.8	10.3	12.4	-114.11	-574.1	225.7	669.7	650.5	19.22	34.839		
3,700.0	3,664.0	3,614.3	3,545.1	10.6	12.8	-113.94	-596.1	232.9	693.5	673.6	19.84	34.952		
3,800.0	3,762.7	3,711.4	3,639.4	10.9	13.3	-113.78	-618.2	240.1	717.3	696.8	20.46	35.058		
3,900.0	3,861.4	3,808.5	3,733.7	11.3	13.7	-113.63	-640.2	247.2	741.0	720.0	21.08	35.157		
4,000.0	3,960.1	3,900.0	3,822.6	11.6	14.1	-113.50	-660.9	254.0	764.8	743.2	21.68	35.283		
4,100.0	4,058.8	3,993.2	3,913.2	11.9	14.5	-113.44	-681.7	261.9	789.3	767.1	22.27	35.448		
4,200.0	4,157.5	4,082.4	3,999.8	12.2	14.9	-113.47	-700.9	270.7	814.7	791.9	22.83	35.679		
4,300.0	4,256.2	4,171.0	4,085.9	12.6	15.3	-113.57	-719.4	280.7	841.0	817.7	23.40	35.949		
4,400.0	4,355.0	4,267.1	4,179.1	12.9	15.7	-113.72	-739.2	292.3	867.9	843.9	23.98	36.193		
4,500.0	4,453.7	4,363.4	4,272.7	13.2	16.2	-113.85	-759.0	303.9	894.7	870.1	24.56	36.424		
4,600.0	4,552.4	4,459.7	4,366.2	13.6	16.6	-113.99	-778.8	315.5	921.5	896.4	25.15	36.645		
4,700.0	4,651.1	4,556.0	4,459.8	13.9	17.0	-114.11	-798.6	327.1	948.3	922.6	25.73	36.856		
4,800.0	4,749.8	4,652.3	4,553.3	14.2	17.5	-114.23	-818.4	338.7	975.2	948.8	26.31	37.058		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - 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		
0.0	0.0	1.0	1.0	0.0	0.0	90.05	0.0	50.4	50.4						
100.0	100.0	101.0	101.0	0.2	0.2	90.05	0.0	50.4	50.4	50.1	0.31	165.057			
166.3	166.3	167.3	167.3	0.3	0.3	90.05	0.0	50.4	50.4	49.9	0.54	93.886 CC			
200.0	200.0	201.0	201.0	0.3	0.3	90.05	0.0	50.4	50.4	49.8	0.65	77.027 ES			
300.0	300.0	300.4	300.4	0.5	0.5	90.78	-0.7	51.0	51.0	50.0	1.00	50.834			
400.0	400.0	400.0	400.0	0.7	0.7	-140.52	-2.6	52.7	53.5	52.1	1.35	39.496			
500.0	500.0	498.9	498.8	0.9	0.9	-139.07	-5.9	55.6	58.5	56.8	1.71	34.255			
600.0	599.9	597.8	597.5	1.0	1.1	-137.81	-10.3	59.6	66.2	64.1	2.07	31.944			
700.0	699.7	696.4	695.8	1.2	1.3	-136.82	-16.1	64.7	76.4	73.9	2.45	31.241 SF			
800.0	799.4	794.5	793.5	1.4	1.5	-136.07	-23.0	71.0	89.1	86.3	2.83	31.478			
900.0	898.9	892.1	890.4	1.7	1.7	-135.52	-31.2	78.2	104.4	101.2	3.23	32.282			
1,000.0	998.3	989.1	986.6	1.9	2.0	-135.14	-40.5	86.6	122.1	118.5	3.65	33.428			
1,100.0	1,097.4	1,085.4	1,081.8	2.2	2.3	-134.86	-50.9	95.9	142.3	138.3	4.09	34.772			
1,200.0	1,196.3	1,181.5	1,176.7	2.5	2.6	-134.67	-62.5	106.2	164.9	160.4	4.55	36.223			
1,300.0	1,295.0	1,278.7	1,272.6	2.8	2.9	-134.82	-74.4	116.9	188.6	183.6	5.03	37.503			
1,400.0	1,393.7	1,375.8	1,368.4	3.1	3.2	-134.96	-86.4	127.6	212.3	206.8	5.51	38.519			
1,500.0	1,492.4	1,473.0	1,464.2	3.4	3.5	-135.08	-98.3	138.3	236.1	230.1	6.00	39.342			
1,600.0	1,591.1	1,570.1	1,560.0	3.7	3.9	-135.18	-110.3	148.9	259.8	253.3	6.49	40.019			
1,700.0	1,689.8	1,667.2	1,655.8	4.1	4.2	-135.26	-122.2	159.6	283.5	276.5	6.99	40.585			
1,800.0	1,788.6	1,764.4	1,751.6	4.4	4.5	-135.33	-134.2	170.3	307.2	299.7	7.48	41.064			
1,900.0	1,887.3	1,861.5	1,847.4	4.7	4.8	-135.39	-146.1	181.0	330.9	323.0	7.98	41.475			
2,000.0	1,986.0	1,958.7	1,943.3	5.0	5.1	-135.44	-158.0	191.6	354.7	346.2	8.48	41.830			
2,100.0	2,084.7	2,055.8	2,039.1	5.3	5.5	-135.48	-170.0	202.3	378.4	369.4	8.98	42.139			
2,200.0	2,183.4	2,153.0	2,134.9	5.7	5.8	-135.52	-181.9	213.0	402.1	392.6	9.48	42.412			
2,300.0	2,282.1	2,250.1	2,230.7	6.0	6.1	-135.56	-193.9	223.7	425.8	415.9	9.98	42.653			
2,400.0	2,380.8	2,347.3	2,326.5	6.3	6.4	-135.59	-205.8	234.3	449.6	439.1	10.49	42.868			
2,500.0	2,479.5	2,444.4	2,422.3	6.6	6.8	-135.62	-217.8	245.0	473.3	462.3	10.99	43.061			
2,600.0	2,578.2	2,541.5	2,518.2	7.0	7.1	-135.64	-229.7	255.7	497.0	485.5	11.50	43.234			
2,700.0	2,676.9	2,638.7	2,614.0	7.3	7.4	-135.67	-241.6	266.4	520.7	508.7	12.00	43.392			
2,800.0	2,775.6	2,735.8	2,709.8	7.6	7.7	-135.69	-253.6	277.0	544.5	531.9	12.51	43.535			
2,900.0	2,874.3	2,833.0	2,805.6	8.0	8.1	-135.71	-265.5	287.7	568.2	555.2	13.01	43.666			
3,000.0	2,973.0	2,930.1	2,901.4	8.3	8.4	-135.72	-277.5	298.4	591.9	578.4	13.52	43.786			
3,100.0	3,071.8	3,027.3	2,997.2	8.6	8.7	-135.74	-289.4	309.1	615.6	601.6	14.02	43.896			
3,200.0	3,170.5	3,124.4	3,093.0	8.9	9.0	-135.76	-301.4	319.7	639.3	624.8	14.53	43.998			
3,300.0	3,269.2	3,221.6	3,188.9	9.3	9.4	-135.77	-313.3	330.4	663.1	648.0	15.04	44.092			
3,400.0	3,367.9	3,318.7	3,284.7	9.6	9.7	-135.78	-325.2	341.1	686.8	671.2	15.55	44.180			
3,500.0	3,466.6	3,415.9	3,380.5	9.9	10.0	-135.80	-337.2	351.8	710.5	694.5	16.05	44.261			
3,600.0	3,565.3	3,513.0	3,476.3	10.3	10.4	-135.81	-349.1	362.4	734.2	717.7	16.56	44.337			
3,700.0	3,664.0	3,610.1	3,572.1	10.6	10.7	-135.82	-361.1	373.1	758.0	740.9	17.07	44.408			
3,800.0	3,762.7	3,707.3	3,667.9	10.9	11.0	-135.83	-373.0	383.8	781.7	764.1	17.58	44.474			
3,900.0	3,861.4	3,804.4	3,763.8	11.3	11.3	-135.84	-385.0	394.5	805.4	787.3	18.08	44.537			
4,000.0	3,960.1	3,901.6	3,859.6	11.6	11.7	-135.85	-396.9	405.1	829.1	810.5	18.59	44.596			
4,100.0	4,058.8	3,998.7	3,955.4	11.9	12.0	-135.85	-408.8	415.8	852.9	833.8	19.10	44.651			
4,200.0	4,157.5	4,095.9	4,051.2	12.2	12.3	-135.86	-420.8	426.5	876.6	857.0	19.61	44.703			
4,300.0	4,256.2	4,193.0	4,147.0	12.6	12.6	-135.87	-432.7	437.2	900.3	880.2	20.12	44.752			
4,400.0	4,355.0	4,290.2	4,242.8	12.9	13.0	-135.88	-444.7	447.8	924.0	903.4	20.63	44.799			
4,500.0	4,453.7	4,387.3	4,338.6	13.2	13.3	-135.88	-456.6	458.5	947.8	926.6	21.13	44.843			
4,600.0	4,552.4	4,484.4	4,434.5	13.6	13.6	-135.89	-468.6	469.2	971.5	949.8	21.64	44.886			
4,700.0	4,651.1	4,581.6	4,530.3	13.9	14.0	-135.90	-480.5	479.9	995.2	973.1	22.15	44.925			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - WILLIAM PELTIER 12-20 - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 100-Gyro													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
14,800.0	8,016.0	8,036.5	8,034.2	114.1	7.0	-88.45	7,233.0	-979.0	954.2	834.4	119.76	7.967		
14,900.0	8,016.0	8,037.1	8,034.9	115.8	7.0	-88.71	7,233.0	-979.0	855.4	733.9	121.51	7.040		
15,000.0	8,016.0	8,037.7	8,035.5	117.5	7.0	-88.98	7,233.0	-979.0	756.9	633.6	123.26	6.141		
15,100.0	8,016.0	8,038.4	8,036.1	119.2	7.0	-89.24	7,233.0	-979.0	658.9	533.9	125.01	5.271		
15,200.0	8,016.0	8,039.0	8,036.8	121.0	7.0	-89.49	7,233.0	-979.0	561.5	434.8	126.75	4.430		
15,300.0	8,016.0	8,039.6	8,037.4	122.7	7.0	-89.75	7,233.0	-979.0	465.3	336.8	128.50	3.621		
15,400.0	8,016.0	8,040.3	8,038.0	124.4	7.0	-90.01	7,233.0	-979.0	371.2	240.9	130.24	2.850		
15,500.0	8,016.0	8,040.9	8,038.6	126.1	7.0	-90.26	7,233.0	-979.0	281.0	149.0	131.98	2.129		
15,600.0	8,016.0	8,041.5	8,039.3	127.9	7.0	-90.52	7,233.0	-979.0	200.4	66.6	133.80	1.498	Level 3	
15,700.0	8,016.0	8,042.1	8,039.9	129.6	7.0	-90.78	7,233.0	-979.0	145.0	9.2	135.80	1.068	Level 2	
15,748.1	8,016.0	8,042.4	8,040.1	130.4	7.0	-90.89	7,233.0	-978.9	137.0	0.2	136.75	1.002	Level 2, CC, ES, SF	
15,800.0	8,016.0	8,042.7	8,040.4	131.3	7.0	-91.01	7,233.0	-978.9	146.2	8.5	137.76	1.061	Level 2	
15,900.0	8,016.0	8,043.2	8,041.0	133.1	7.0	-91.22	7,233.0	-978.9	203.1	63.5	139.69	1.454	Level 3	
16,000.0	8,016.0	8,043.7	8,041.5	134.8	7.0	-91.40	7,233.0	-978.9	284.0	142.4	141.57	2.006		
16,100.0	8,016.0	8,044.2	8,041.9	136.6	7.0	-91.53	7,233.0	-978.9	373.6	230.2	143.42	2.605		
16,200.0	8,016.0	8,044.6	8,042.4	138.3	7.0	-91.64	7,233.0	-978.9	466.9	321.6	145.23	3.215		
16,300.0	8,016.0	8,045.1	8,042.8	140.0	7.0	-91.81	7,233.0	-978.9	562.3	415.3	146.96	3.826		
16,400.0	8,016.0	8,045.5	8,043.3	141.8	7.0	-91.97	7,233.0	-978.9	659.0	510.3	148.69	4.432		
16,500.0	8,016.0	8,045.9	8,043.7	143.5	7.0	-92.13	7,233.0	-978.9	756.6	606.2	150.43	5.030		
16,600.0	8,016.0	8,046.4	8,044.1	145.3	7.0	-92.29	7,233.0	-978.9	854.8	702.6	152.16	5.618		
16,700.0	8,016.0	8,046.8	8,044.6	147.0	7.0	-92.46	7,233.1	-978.9	953.3	799.5	153.89	6.195		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - WILLIAM PELTIER 1A-20H - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 911-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
14,900.0	8,016.0	12,503.6	7,679.9	115.8	116.2	-34.43	7,240.4	-1,084.7	953.8	859.5	94.30	10.115		
15,000.0	8,016.0	12,474.7	7,680.8	117.5	115.5	-31.37	7,248.3	-1,056.9	865.5	775.9	89.63	9.657		
15,100.0	8,016.0	12,444.1	7,681.7	119.2	114.8	-27.88	7,256.5	-1,027.5	778.9	695.0	83.90	9.284		
15,200.0	8,016.0	12,411.3	7,682.9	121.0	114.0	-23.85	7,265.3	-995.8	694.6	617.7	76.92	9.030		
15,300.0	8,016.0	12,382.1	7,683.9	122.7	113.3	-20.03	7,273.0	-967.7	613.5	543.3	70.21	8.739		
15,400.0	8,016.0	12,353.7	7,684.8	124.4	112.6	-16.08	7,280.4	-940.3	537.4	474.1	63.30	8.490		
15,500.0	8,016.0	12,326.0	7,685.6	126.1	112.0	-12.04	7,287.5	-913.5	468.7	412.1	56.59	8.282		
15,600.0	8,016.0	12,298.9	7,686.3	127.9	111.3	-7.80	7,294.4	-887.4	411.0	360.6	50.42	8.153		
15,700.0	8,016.0	12,273.5	7,687.0	129.6	110.7	-3.38	7,300.8	-862.8	369.8	323.8	45.99	8.041		
15,800.0	8,016.0	12,250.0	7,687.5	131.3	110.1	0.52	7,306.7	-840.1	351.1	306.3	44.78	7.841		
15,821.3	8,016.0	12,245.3	7,687.6	131.7	110.0	1.28	7,307.9	-835.5	350.5	305.6	44.90	7.806 CC, ES		
15,900.0	8,016.0	12,228.4	7,688.0	133.1	109.6	3.89	7,312.1	-819.1	358.8	312.6	46.17	7.771 SF		
16,000.0	8,016.0	12,208.1	7,688.4	134.8	109.1	6.77	7,317.2	-799.5	391.7	342.7	49.03	7.989		
16,100.0	8,016.0	12,189.3	7,688.8	136.6	108.7	9.13	7,321.9	-781.3	444.4	392.1	52.32	8.494		
16,200.0	8,016.0	12,172.0	7,689.1	138.3	108.2	11.09	7,326.2	-764.5	510.9	455.4	55.58	9.193		
16,300.0	8,016.0	12,155.2	7,689.4	140.0	107.8	13.69	7,330.5	-748.3	586.7	526.3	60.41	9.712		
16,400.0	8,016.0	12,139.0	7,689.7	141.8	107.5	16.16	7,334.6	-732.6	668.4	602.9	65.43	10.215		
16,500.0	8,016.0	12,123.7	7,689.9	143.5	107.1	18.43	7,338.5	-717.8	754.1	683.7	70.41	10.711		
16,600.0	8,016.0	12,109.3	7,690.1	145.3	106.7	20.51	7,342.1	-703.9	842.8	767.5	75.24	11.201		
16,700.0	8,016.0	12,095.2	7,690.2	147.0	106.4	22.51	7,345.7	-690.2	933.5	853.4	80.07	11.658		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Waste Connections 3B-29H-M168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	MD Reference:	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Waste Connections 3B-29H-M168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5153.0ft (Original Well Elev)

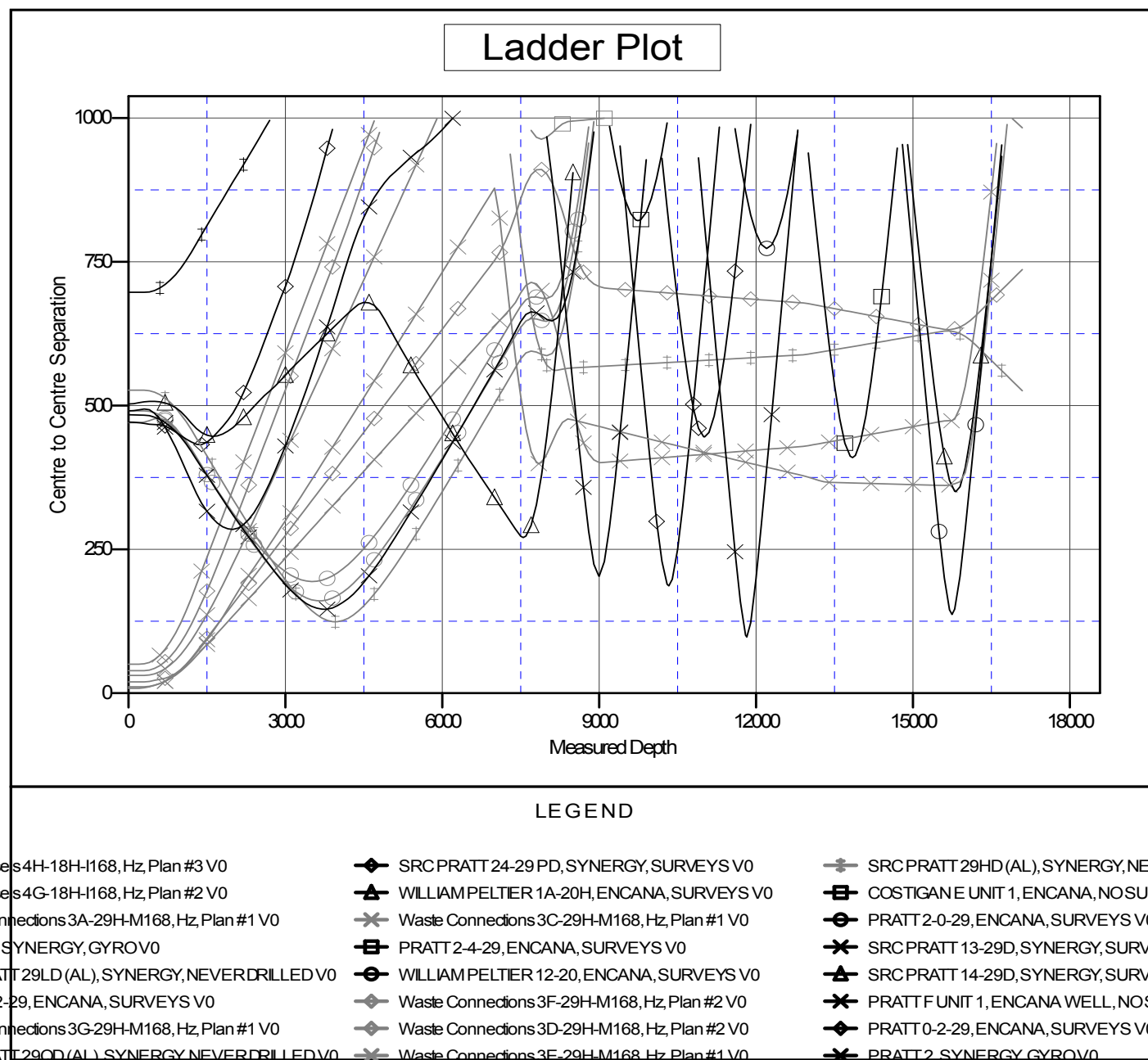
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Waste Connections 3B-29H-M168

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.30°



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