

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site:	S9-T2N-R67W (Sprague)	North Reference:	True
Well:	Sprague 3A-9H-N267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

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		S9-T2N-R67W (Sprague)			
Site Position:		Northing:	1,298,443.90 ft	Latitude:	40.151070
From:	Lat/Long	Easting:	3,167,093.12 ft	Longitude:	-104.902260
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.39 °

Well	Sprague 3A-9H-N267					
Well Position	+N/-S	0.0 ft	Northing:	1,296,975.45 ft	Latitude:	40.147020
	+E/-W	0.0 ft	Easting:	3,168,117.81 ft	Longitude:	-104.898630
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,981.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	11/4/2013	8.59	66.74	52,731

Design	Plan #3			
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	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.00	0.00	
834.4	11.69	247.73	830.4	-22.5	-55.0	2.00	2.00	0.00	247.73	
6,829.4	11.69	247.73	6,701.1	-482.8	-1,178.9	0.00	0.00	0.00	0.00	
7,773.4	90.00	0.00	7,307.0	88.4	-1,294.9	10.00	8.30	11.89	111.86	
12,923.4	90.00	0.00	7,307.0	5,238.4	-1,294.9	0.00	0.00	0.00	0.00	Sprague 3A-9H-N267

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Well:	Sprague 3A-9H-N267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

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	
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	KOP @ 250'
300.0	1.00	247.73	300.0	-0.2	-0.4	-0.2	2.00	2.00	
400.0	3.00	247.73	399.9	-1.5	-3.6	-1.5	2.00	2.00	
461.2	4.22	247.73	461.0	-2.9	-7.2	-2.9	2.00	2.00	Fox Hills - BASE
500.0	5.00	247.73	499.7	-4.1	-10.1	-4.1	2.00	2.00	
600.0	7.00	247.73	599.1	-8.1	-19.8	-8.1	2.00	2.00	
700.0	9.00	247.73	698.2	-13.4	-32.6	-13.4	2.00	2.00	
800.0	11.00	247.73	796.6	-19.9	-48.7	-19.9	2.00	2.00	
834.4	11.69	247.73	830.4	-22.5	-55.0	-22.5	2.00	2.00	EOB; Inc=11.69°
900.0	11.69	247.73	894.6	-27.6	-67.3	-27.6	0.00	0.00	
1,000.0	11.69	247.73	992.5	-35.2	-86.0	-35.2	0.00	0.00	
1,100.0	11.69	247.73	1,090.4	-42.9	-104.8	-42.9	0.00	0.00	
1,200.0	11.69	247.73	1,188.4	-50.6	-123.5	-50.6	0.00	0.00	
1,300.0	11.69	247.73	1,286.3	-58.3	-142.3	-58.3	0.00	0.00	
1,400.0	11.69	247.73	1,384.2	-65.9	-161.0	-65.9	0.00	0.00	
1,500.0	11.69	247.73	1,482.2	-73.6	-179.7	-73.6	0.00	0.00	
1,600.0	11.69	247.73	1,580.1	-81.3	-198.5	-81.3	0.00	0.00	
1,700.0	11.69	247.73	1,678.0	-89.0	-217.2	-89.0	0.00	0.00	
1,800.0	11.69	247.73	1,775.9	-96.7	-236.0	-96.7	0.00	0.00	
1,900.0	11.69	247.73	1,873.9	-104.3	-254.7	-104.3	0.00	0.00	
2,000.0	11.69	247.73	1,971.8	-112.0	-273.5	-112.0	0.00	0.00	
2,100.0	11.69	247.73	2,069.7	-119.7	-292.2	-119.7	0.00	0.00	
2,200.0	11.69	247.73	2,167.6	-127.4	-311.0	-127.4	0.00	0.00	
2,300.0	11.69	247.73	2,265.6	-135.1	-329.7	-135.1	0.00	0.00	
2,400.0	11.69	247.73	2,363.5	-142.7	-348.5	-142.7	0.00	0.00	
2,500.0	11.69	247.73	2,461.4	-150.4	-367.2	-150.4	0.00	0.00	
2,600.0	11.69	247.73	2,559.3	-158.1	-386.0	-158.1	0.00	0.00	
2,700.0	11.69	247.73	2,657.3	-165.8	-404.7	-165.8	0.00	0.00	
2,800.0	11.69	247.73	2,755.2	-173.4	-423.5	-173.4	0.00	0.00	
2,900.0	11.69	247.73	2,853.1	-181.1	-442.2	-181.1	0.00	0.00	
3,000.0	11.69	247.73	2,951.0	-188.8	-461.0	-188.8	0.00	0.00	
3,100.0	11.69	247.73	3,049.0	-196.5	-479.7	-196.5	0.00	0.00	
3,200.0	11.69	247.73	3,146.9	-204.2	-498.5	-204.2	0.00	0.00	
3,300.0	11.69	247.73	3,244.8	-211.8	-517.2	-211.8	0.00	0.00	
3,400.0	11.69	247.73	3,342.8	-219.5	-535.9	-219.5	0.00	0.00	
3,500.0	11.69	247.73	3,440.7	-227.2	-554.7	-227.2	0.00	0.00	
3,600.0	11.69	247.73	3,538.6	-234.9	-573.4	-234.9	0.00	0.00	
3,700.0	11.69	247.73	3,636.5	-242.6	-592.2	-242.6	0.00	0.00	
3,800.0	11.69	247.73	3,734.5	-250.2	-610.9	-250.2	0.00	0.00	
3,900.0	11.69	247.73	3,832.4	-257.9	-629.7	-257.9	0.00	0.00	
4,000.0	11.69	247.73	3,930.3	-265.6	-648.4	-265.6	0.00	0.00	
4,100.0	11.69	247.73	4,028.2	-273.3	-667.2	-273.3	0.00	0.00	
4,200.0	11.69	247.73	4,126.2	-280.9	-685.9	-280.9	0.00	0.00	
4,300.0	11.69	247.73	4,224.1	-288.6	-704.7	-288.6	0.00	0.00	
4,400.0	11.69	247.73	4,322.0	-296.3	-723.4	-296.3	0.00	0.00	
4,498.0	11.69	247.73	4,418.0	-303.8	-741.8	-303.8	0.00	0.00	Sussex
4,500.0	11.69	247.73	4,419.9	-304.0	-742.2	-304.0	0.00	0.00	
4,600.0	11.69	247.73	4,517.9	-311.7	-760.9	-311.7	0.00	0.00	
4,700.0	11.69	247.73	4,615.8	-319.3	-779.7	-319.3	0.00	0.00	

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Well:	Sprague 3A-9H-N267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

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
4,750.2	11.69	247.73	4,665.0	-323.2	-789.1	-323.2	0.00	0.00	Sussex Marker
4,800.0	11.69	247.73	4,713.7	-327.0	-798.4	-327.0	0.00	0.00	
4,900.0	11.69	247.73	4,811.7	-334.7	-817.2	-334.7	0.00	0.00	
5,000.0	11.69	247.73	4,909.6	-342.4	-835.9	-342.4	0.00	0.00	
5,054.6	11.69	247.73	4,963.0	-346.6	-846.1	-346.6	0.00	0.00	Shannon
5,100.0	11.69	247.73	5,007.5	-350.1	-854.6	-350.1	0.00	0.00	
5,200.0	11.69	247.73	5,105.4	-357.7	-873.4	-357.7	0.00	0.00	
5,300.0	11.69	247.73	5,203.4	-365.4	-892.1	-365.4	0.00	0.00	
5,400.0	11.69	247.73	5,301.3	-373.1	-910.9	-373.1	0.00	0.00	
5,500.0	11.69	247.73	5,399.2	-380.8	-929.6	-380.8	0.00	0.00	
5,600.0	11.69	247.73	5,497.1	-388.4	-948.4	-388.4	0.00	0.00	
5,700.0	11.69	247.73	5,595.1	-396.1	-967.1	-396.1	0.00	0.00	
5,800.0	11.69	247.73	5,693.0	-403.8	-985.9	-403.8	0.00	0.00	
5,900.0	11.69	247.73	5,790.9	-411.5	-1,004.6	-411.5	0.00	0.00	
6,000.0	11.69	247.73	5,888.8	-419.2	-1,023.4	-419.2	0.00	0.00	
6,100.0	11.69	247.73	5,986.8	-426.8	-1,042.1	-426.8	0.00	0.00	
6,200.0	11.69	247.73	6,084.7	-434.5	-1,060.9	-434.5	0.00	0.00	
6,300.0	11.69	247.73	6,182.6	-442.2	-1,079.6	-442.2	0.00	0.00	
6,400.0	11.69	247.73	6,280.5	-449.9	-1,098.4	-449.9	0.00	0.00	
6,431.1	11.69	247.73	6,311.0	-452.3	-1,104.2	-452.3	0.00	0.00	Teepee Buttes (*if present)
6,500.0	11.69	247.73	6,378.5	-457.6	-1,117.1	-457.6	0.00	0.00	
6,600.0	11.69	247.73	6,476.4	-465.2	-1,135.9	-465.2	0.00	0.00	
6,700.0	11.69	247.73	6,574.3	-472.9	-1,154.6	-472.9	0.00	0.00	
6,800.0	11.69	247.73	6,672.3	-480.6	-1,173.3	-480.6	0.00	0.00	
6,829.4	11.69	247.73	6,701.1	-482.8	-1,178.9	-482.8	0.00	0.00	Start build/turn @ 6829' MD
6,850.0	11.09	257.72	6,721.2	-484.1	-1,182.7	-484.1	10.00	-2.93	
6,900.0	11.15	283.86	6,770.3	-483.9	-1,192.1	-483.9	10.00	0.14	
6,950.0	13.24	305.56	6,819.2	-479.4	-1,201.5	-479.4	10.00	4.18	
7,000.0	16.60	320.06	6,867.6	-470.6	-1,210.7	-470.6	10.00	6.72	
7,050.0	20.63	329.43	6,914.9	-457.5	-1,219.8	-457.5	10.00	8.04	
7,100.0	24.99	335.75	6,961.0	-440.3	-1,228.6	-440.3	10.00	8.73	
7,150.0	29.55	340.26	7,005.5	-419.1	-1,237.1	-419.1	10.00	9.11	
7,200.0	34.22	343.65	7,047.9	-394.0	-1,245.3	-394.0	10.00	9.34	
7,250.0	38.96	346.31	7,088.0	-365.2	-1,252.9	-365.2	10.00	9.49	
7,300.0	43.75	348.47	7,125.6	-333.0	-1,260.1	-333.0	10.00	9.59	
7,350.0	48.58	350.28	7,160.2	-297.5	-1,266.8	-297.5	10.00	9.65	
7,387.4	52.20	351.46	7,184.0	-269.1	-1,271.3	-269.1	10.00	9.70	Sharon Springs
7,400.0	53.43	351.84	7,191.6	-259.1	-1,272.8	-259.1	10.00	9.72	
7,450.0	58.30	353.21	7,219.7	-218.1	-1,278.2	-218.1	10.00	9.74	
7,500.0	63.18	354.45	7,244.1	-174.8	-1,282.8	-174.8	10.00	9.76	
7,511.0	64.26	354.70	7,249.0	-164.9	-1,283.8	-164.9	10.00	9.78	Niobrara
7,550.0	68.07	355.58	7,264.7	-129.4	-1,286.8	-129.4	10.00	9.79	
7,600.0	72.97	356.64	7,281.4	-82.4	-1,290.0	-82.4	10.00	9.80	
7,650.0	77.88	357.64	7,294.0	-34.1	-1,292.4	-34.1	10.00	9.81	
7,665.3	79.38	357.94	7,297.0	-19.1	-1,293.0	-19.1	10.00	9.81	B Chalk
7,700.0	82.79	358.61	7,302.4	15.2	-1,294.0	15.2	10.00	9.82	
7,750.0	87.70	359.56	7,306.5	65.0	-1,294.8	65.0	10.00	9.82	
7,773.4	90.00	0.00	7,307.0	88.4	-1,294.9	88.4	10.00	9.82	LP @ 7307' TVD; 90°
7,800.0	90.00	0.00	7,307.0	115.0	-1,294.9	115.0	0.00	0.00	
7,900.0	90.00	0.00	7,307.0	215.0	-1,294.9	215.0	0.00	0.00	
8,000.0	90.00	0.00	7,307.0	315.0	-1,294.9	315.0	0.00	0.00	
8,100.0	90.00	0.00	7,307.0	415.0	-1,294.9	415.0	0.00	0.00	

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Wellbore:	Hz		
Design:	Plan #3		

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
8,200.0	90.00	0.00	7,307.0	515.0	-1,294.9	515.0	0.00	0.00	
8,300.0	90.00	0.00	7,307.0	615.0	-1,294.9	615.0	0.00	0.00	
8,400.0	90.00	0.00	7,307.0	715.0	-1,294.9	715.0	0.00	0.00	
8,500.0	90.00	0.00	7,307.0	815.0	-1,294.9	815.0	0.00	0.00	
8,600.0	90.00	0.00	7,307.0	915.0	-1,294.9	915.0	0.00	0.00	
8,700.0	90.00	0.00	7,307.0	1,015.0	-1,294.9	1,015.0	0.00	0.00	
8,800.0	90.00	0.00	7,307.0	1,115.0	-1,294.9	1,115.0	0.00	0.00	
8,900.0	90.00	0.00	7,307.0	1,215.0	-1,294.9	1,215.0	0.00	0.00	
9,000.0	90.00	0.00	7,307.0	1,315.0	-1,294.9	1,315.0	0.00	0.00	
9,100.0	90.00	0.00	7,307.0	1,415.0	-1,294.9	1,415.0	0.00	0.00	
9,200.0	90.00	0.00	7,307.0	1,515.0	-1,294.9	1,515.0	0.00	0.00	
9,300.0	90.00	0.00	7,307.0	1,615.0	-1,294.9	1,615.0	0.00	0.00	
9,400.0	90.00	0.00	7,307.0	1,715.0	-1,294.9	1,715.0	0.00	0.00	
9,500.0	90.00	0.00	7,307.0	1,815.0	-1,294.9	1,815.0	0.00	0.00	
9,600.0	90.00	0.00	7,307.0	1,915.0	-1,294.9	1,915.0	0.00	0.00	
9,700.0	90.00	0.00	7,307.0	2,015.0	-1,294.9	2,015.0	0.00	0.00	
9,800.0	90.00	0.00	7,307.0	2,115.0	-1,294.9	2,115.0	0.00	0.00	
9,900.0	90.00	0.00	7,307.0	2,215.0	-1,294.9	2,215.0	0.00	0.00	
10,000.0	90.00	0.00	7,307.0	2,315.0	-1,294.9	2,315.0	0.00	0.00	
10,100.0	90.00	0.00	7,307.0	2,415.0	-1,294.9	2,415.0	0.00	0.00	
10,200.0	90.00	0.00	7,307.0	2,515.0	-1,294.9	2,515.0	0.00	0.00	
10,300.0	90.00	0.00	7,307.0	2,615.0	-1,294.9	2,615.0	0.00	0.00	
10,400.0	90.00	0.00	7,307.0	2,715.0	-1,294.9	2,715.0	0.00	0.00	
10,500.0	90.00	0.00	7,307.0	2,815.0	-1,294.9	2,815.0	0.00	0.00	
10,600.0	90.00	0.00	7,307.0	2,915.0	-1,294.9	2,915.0	0.00	0.00	
10,700.0	90.00	0.00	7,307.0	3,015.0	-1,294.9	3,015.0	0.00	0.00	
10,800.0	90.00	0.00	7,307.0	3,115.0	-1,294.9	3,115.0	0.00	0.00	
10,900.0	90.00	0.00	7,307.0	3,215.0	-1,294.9	3,215.0	0.00	0.00	
11,000.0	90.00	0.00	7,307.0	3,315.0	-1,294.9	3,315.0	0.00	0.00	
11,100.0	90.00	0.00	7,307.0	3,415.0	-1,294.9	3,415.0	0.00	0.00	
11,200.0	90.00	0.00	7,307.0	3,515.0	-1,294.9	3,515.0	0.00	0.00	
11,300.0	90.00	0.00	7,307.0	3,615.0	-1,294.9	3,615.0	0.00	0.00	
11,400.0	90.00	0.00	7,307.0	3,715.0	-1,294.9	3,715.0	0.00	0.00	
11,500.0	90.00	0.00	7,307.0	3,815.0	-1,294.9	3,815.0	0.00	0.00	
11,600.0	90.00	0.00	7,307.0	3,915.0	-1,294.9	3,915.0	0.00	0.00	
11,700.0	90.00	0.00	7,307.0	4,015.0	-1,294.9	4,015.0	0.00	0.00	
11,800.0	90.00	0.00	7,307.0	4,115.0	-1,294.9	4,115.0	0.00	0.00	
11,900.0	90.00	0.00	7,307.0	4,215.0	-1,294.9	4,215.0	0.00	0.00	
12,000.0	90.00	0.00	7,307.0	4,315.0	-1,294.9	4,315.0	0.00	0.00	
12,100.0	90.00	0.00	7,307.0	4,415.0	-1,294.9	4,415.0	0.00	0.00	
12,200.0	90.00	0.00	7,307.0	4,515.0	-1,294.9	4,515.0	0.00	0.00	
12,300.0	90.00	0.00	7,307.0	4,615.0	-1,294.9	4,615.0	0.00	0.00	
12,400.0	90.00	0.00	7,307.0	4,715.0	-1,294.9	4,715.0	0.00	0.00	
12,500.0	90.00	0.00	7,307.0	4,815.0	-1,294.9	4,815.0	0.00	0.00	
12,600.0	90.00	0.00	7,307.0	4,915.0	-1,294.9	4,915.0	0.00	0.00	
12,700.0	90.00	0.00	7,307.0	5,015.0	-1,294.9	5,015.0	0.00	0.00	
12,800.0	90.00	0.00	7,307.0	5,115.0	-1,294.9	5,115.0	0.00	0.00	
12,900.0	90.00	0.00	7,307.0	5,215.0	-1,294.9	5,215.0	0.00	0.00	
12,923.4	90.00	0.00	7,307.0	5,238.4	-1,294.9	5,238.4	0.00	0.00	TD at 12923.4

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site:	S9-T2N-R67W (Sprague)	North Reference:	True
Well:	Sprague 3A-9H-N267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Sprague 3A-9H-N267 PI	0.00	0.39	7,307.0	5,238.4	-1,294.9	1,302,204.97	3,166,787.45	40.161400	-104.903263
- plan hits target center									
- Point									
Interp @ 7297.6 (Sprague)	0.00	0.00	7,297.6	-16.0	-1,293.1	1,296,950.68	3,166,824.89	40.146976	-104.903256
- plan hits target center									
- Point									
Sprague 3X-9H-N267 PI	0.00	0.39	7,307.0	5,238.4	-1,514.8	1,302,203.48	3,166,567.48	40.161400	-104.904050
- plan misses target center by 220.0ft at 12923.4ft MD (7307.0 TVD, 5238.4 N, -1294.9 E)									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
461.2	461.0	Fox Hills - BASE				
4,498.0	4,418.0	Sussex				
4,750.2	4,665.0	Sussex Marker				
5,054.6	4,963.0	Shannon				
6,431.1	6,311.0	Teepee Buttes (*if present)				
7,387.4	7,184.0	Sharon Springs				
7,511.0	7,249.0	Niobrara				
7,665.3	7,297.0	B Chalk				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
250.0	250.0	0.0	0.0	KOP @ 250'
834.4	830.4	-22.5	-55.0	EOB; Inc=11.69°
6,829.4	6,701.1	-482.8	-1,178.9	Start build/turn @ 6829' MD
7,773.4	7,307.0	88.4	-1,294.9	LP @ 7307' TVD; 90°
12,923.4	7,307.0	5,238.4	-1,294.9	TD at 12923.4

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S9-T2N-R67W (Sprague)

Sprague 3A-9H-N267

Hz

Plan #3

Anticollision Report

06 August, 2014

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date	8/6/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	12,923.4	Plan #3 (Hz)	Geolink MWD	Geolink MWD

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance		Separation Factor	Warning
			Between Centres (ft)	Between Ellipses (ft)		
S9-T2N-R67W (Sprague)						
BARNES 34-4 (EXISTING) - ENCANA WELL - EXISTING						Out of range
DIER 1 (EXISTING) - ENCANA WELL - EXISTING - VES						Out of range
DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS	9,742.3	7,352.4	492.6	436.9	8.847	CC, ES
DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS	9,800.0	7,353.7	496.0	439.3	8.757	SF
DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS	8,450.3	7,337.3	483.8	444.9	12.436	CC, ES
DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS	8,500.0	7,337.1	486.3	446.8	12.295	SF
ECKSTINE V 9-15 (EXISTING) - NOBLE WELL - NO SU						Out of range
ECKSTINE V 9-16 (EXISTING) - ANADARKO WELL - E						Out of range
KATHERINE 1 (EXISTING) - MACEY-MERSHON WELL						Out of range
LUHMAN 1 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
LUHMAN 44-4 (EXISTING) - ENCANA WELL - SURVEY						Out of range
SATER 40N-5HZ (EXISTING) - KERR-MCGEE WELL - B						Out of range
SHELEY 1 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
SHELEY 14-4 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
SHELEY 24-4 (EXISTING MR) - MACHII-ROSS WELL -						Out of range
SHELEY 24-4 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
SHELEY 3A-4H (EXISTING) - ENCANA WELL - SURVE	12,923.4	7,350.9	344.4	277.2	5.123	CC, ES, SF
SHELEY 3B-4H (EXISTING) - ENCANA WELL - SURVE						Out of range
SHELEY 4-6-4 (EXISTING) - ENCANA WELL - SURVEY						Out of range
SPRAGUE 1 (EXISTING) - ENCANA WELL - EXISTING						Out of range
SPRAGUE 1 (EXISTING) MACHII - MACHII-ROSS WELL						Out of range
SPRAGUE 11-9 (EXISTING) - ENCANA WELL - SURVE	11,771.6	7,240.4	196.5	109.3	2.253	CC, ES, SF
SPRAGUE 13-9 (EXISTING) - ENCANA WELL - SURVE	9,201.9	7,273.0	261.7	217.7	5.953	CC, ES, SF
SPRAGUE 14-9 (EXISTING) - ENCANA WELL - EXISTIN	7,873.1	7,274.7	169.4	148.9	8.251	CC, ES, SF
SPRAGUE 1-9 (EXISTING) - MACHII-ROSS WELL - NO						Out of range
SPRAGUE 2 (EXISTING) - MACHII-ROSS WELL - NO S						Out of range
SPRAGUE 21-9 (EXISTING) - DD - Plan #1						Out of range
SPRAGUE 22-9 J (EXISTING) - MACHII-ROSS WELL -						Out of range
SPRAGUE 23-9 J (EXISTING) - MACHII-ROSS WELL -						Out of range
SPRAGUE 24-9 (EXISTING) - ENCANA WELL - EXISTIN	100.0	68.4	176.4	176.2	969.332	CC, ES
SPRAGUE 24-9 (EXISTING) - ENCANA WELL - EXISTIN	2,100.0	2,039.2	483.1	477.6	87.756	SF
SPRAGUE 2-4-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 24-9 J (EXISTING) - MACHII-ROSS WELL -	200.0	176.0	244.7	244.1	405.052	CC
SPRAGUE 24-9 J (EXISTING) - MACHII-ROSS WELL -	227.8	203.8	244.8	244.0	349.119	ES
SPRAGUE 24-9 J (EXISTING) - MACHII-ROSS WELL -	1,800.0	1,751.9	499.7	493.6	81.779	SF
SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVE	2,125.4	2,155.9	275.7	264.1	23.769	CC
SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVE	3,200.0	3,229.4	280.0	260.1	14.020	ES
SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVE	4,100.0	4,116.7	302.0	276.0	11.606	SF
SPRAGUE 31-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 32-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 33-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 34-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 3-9 (EXISTING) - ENCANA WELL - SURVEY						Out of range
Sprague 3AA-9H-N267 - Hz - Plan #3	200.0	200.0	10.0	9.4	16.796	CC, ES
Sprague 3AA-9H-N267 - Hz - Plan #3	12,923.4	13,087.3	309.7	172.6	2.260	SF
Sprague 3B-9H-N267 - Hz - Plan #4	200.0	200.0	11.2	10.6	18.844	CC
Sprague 3B-9H-N267 - Hz - Plan #4	228.0	228.0	11.2	10.6	16.273	ES
Sprague 3B-9H-N267 - Hz - Plan #4	12,923.4	13,100.2	312.4	175.8	2.287	SF
Sprague 3C-9H-N267 - Hz - Plan #2	200.0	200.0	19.6	19.0	32.976	CC
Sprague 3C-9H-N267 - Hz - Plan #2	227.9	227.9	19.6	18.9	28.419	ES
Sprague 3C-9H-N267 - Hz - Plan #2	12,923.4	12,840.5	478.9	290.0	2.536	SF
Sprague 3D-9H-N267 - Hz - Plan #3	200.0	200.0	30.8	30.2	51.820	CC
Sprague 3D-9H-N267 - Hz - Plan #3	227.9	227.9	30.8	30.1	44.616	ES

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	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						
S9-T2N-R67W (Sprague)						
Sprague 3D-9H-N267 - Hz - Plan #3	5,800.0	5,795.7	434.8	412.7	19.712	SF
Sprague 3E-9H-N267 - Hz - Plan #3	200.0	200.0	39.1	38.5	65.953	CC
Sprague 3E-9H-N267 - Hz - Plan #3	300.0	300.3	39.2	38.3	41.550	ES
Sprague 3E-9H-N267 - Hz - Plan #3	3,200.0	3,175.9	422.5	403.5	22.208	SF
Sprague 3F-9H-N267 - Hz - Plan #3	200.0	200.0	50.3	49.7	84.796	CC
Sprague 3F-9H-N267 - Hz - Plan #3	227.8	227.8	50.4	49.7	72.960	ES
Sprague 3F-9H-N267 - Hz - Plan #3	600.0	599.0	70.6	68.6	35.462	SF
Sprague 3G-9H-N267 - Hz - Plan #2	200.0	200.0	61.5	60.9	103.640	CC
Sprague 3G-9H-N267 - Hz - Plan #2	227.8	227.8	61.6	60.9	89.156	ES
Sprague 3G-9H-N267 - Hz - Plan #2	600.0	597.2	83.9	81.9	42.136	SF
Sprague 3H-9H-N267 - Hz - Plan #3	200.0	200.0	69.9	69.3	117.772	CC
Sprague 3H-9H-N267 - Hz - Plan #3	227.8	227.8	70.0	69.3	101.304	ES
Sprague 3H-9H-N267 - Hz - Plan #3	600.0	594.0	95.5	93.5	47.975	SF
Sprague 3I-9H-N267 - Hz - Plan #3	200.0	200.0	81.2	80.6	136.754	CC
Sprague 3I-9H-N267 - Hz - Plan #3	227.8	227.8	81.2	80.5	117.614	ES
Sprague 3I-9H-N267 - Hz - Plan #3	600.0	588.9	114.8	112.8	57.722	SF
Sprague 3J-9H-N267 - Hz - Plan #3	200.0	200.0	89.5	88.9	150.874	CC, ES
Sprague 3J-9H-N267 - Hz - Plan #3	600.0	582.2	136.0	134.0	69.239	SF
SPRAGUE 41-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 42-9 (EXISTING) - ENCANA WELL - EXISTIN						Out of range
SPRAGUE 43-9 (EXISTING) - ENCANA WELL - GYRO						Out of range
SPRAGUE 44-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 4-6-9 (EXISTING) - ENCANA WELL - SURVE	169.0	151.4	284.0	283.5	579.883	CC
SPRAGUE 4-6-9 (EXISTING) - ENCANA WELL - SURVE	200.0	181.5	284.0	283.4	476.142	ES
SPRAGUE 4-6-9 (EXISTING) - ENCANA WELL - SURVE	1,200.0	1,093.1	494.8	490.6	116.083	SF
SPRAGUE 4-8-9 (EXISTING) - ENCANA WELL - SURVE	200.0	182.8	278.6	278.0	465.284	CC
SPRAGUE 4-8-9 (EXISTING) - ENCANA WELL - SURVE	300.0	283.2	278.7	277.8	293.355	ES
SPRAGUE 4-8-9 (EXISTING) - ENCANA WELL - SURVE	1,500.0	1,403.0	477.4	472.0	87.375	SF
SPRAGUE 6-0-9 (EXISTING) - ENCANA WELL - PLAN O						Out of range
SPRAGUE 6-4-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 8-6-9 (EXISTING) - ENCANA WELL - NO SU						Out of range
SPRAGUE V 9-1 (EXISTING) - ANADARKO WELL - EXI						Out of range
SPRAGUE V 9-7 (EXISTING) - NOBLE WELL - NO SUR						Out of range
SPRAGUE V 9-8 (EXISTING) - ANADARKO WELL - EXI						Out of range

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS												Offset Site Error:	0.0 ft
Survey Program: 78-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)			
9,700.0	7,307.0	7,351.4	7,261.6	45.5	18.5	-90.58	2,057.3	-1,787.4	494.4	439.4	54.98	8.993	
9,742.3	7,307.0	7,352.4	7,262.6	46.1	18.5	-90.70	2,057.3	-1,787.4	492.6	436.9	55.68	8.847 CC, ES	
9,800.0	7,307.0	7,353.7	7,263.9	46.9	18.5	-90.85	2,057.3	-1,787.4	496.0	439.3	56.64	8.757 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 52-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)				
8,400.0	7,307.0	7,337.4	7,228.5	30.1	21.3	-86.67	765.3	-1,777.8	486.4	448.1	38.24	12.719		
8,450.3	7,307.0	7,337.3	7,228.4	30.5	21.3	-86.65	765.3	-1,777.8	483.8	444.9	38.90	12.436 CC, ES		
8,500.0	7,307.0	7,337.1	7,228.2	30.9	21.3	-86.64	765.3	-1,777.8	486.3	446.8	39.55	12.295 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
S9-T2N-R67W (Sprague) - SHELEY 3A-4H (EXISTING) - ENCANA WELL - SURVEYS												Offset Well Error:	0.0 ft
Survey Program: 162-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)			
12,800.0	7,307.0	7,356.0	7,112.8	95.1	14.9	38.02	5,554.3	-1,210.3	460.3	391.6	68.67	6.703	
12,900.0	7,307.0	7,351.8	7,110.7	96.8	14.9	36.29	5,554.5	-1,213.9	366.0	298.5	67.51	5.422	
12,923.4	7,307.0	7,350.9	7,110.3	97.2	14.9	35.89	5,554.5	-1,214.7	344.4	277.2	67.23	5.123 CC, ES, SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 11-9 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink 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		
11,400.0	7,307.0	7,240.2	7,237.9	71.9	12.8	89.97	4,086.6	-1,098.4	420.3	339.5	80.82	5.201		
11,500.0	7,307.0	7,240.3	7,238.0	73.5	12.8	89.99	4,086.6	-1,098.4	335.2	252.7	82.54	4.061		
11,600.0	7,307.0	7,240.3	7,238.0	75.1	12.8	90.00	4,086.6	-1,098.4	260.9	176.6	84.26	3.096		
11,700.0	7,307.0	7,240.3	7,238.0	76.8	12.8	90.01	4,086.6	-1,098.4	209.1	123.1	85.99	2.432		
11,771.6	7,307.0	7,240.4	7,238.1	78.0	12.8	90.02	4,086.6	-1,098.4	196.5	109.3	87.23	2.253 CC, ES, SF		
11,800.0	7,307.0	7,240.4	7,238.1	78.4	12.8	90.02	4,086.6	-1,098.4	198.5	110.8	87.72	2.263		
11,900.0	7,307.0	7,240.4	7,238.1	80.1	12.8	90.04	4,086.6	-1,098.4	234.7	145.3	89.44	2.624		
12,000.0	7,307.0	7,240.5	7,238.2	81.7	12.8	90.05	4,086.6	-1,098.4	301.3	210.1	91.17	3.305		
12,100.0	7,307.0	7,240.5	7,238.2	83.4	12.8	90.06	4,086.6	-1,098.4	382.7	289.8	92.90	4.119		
12,200.0	7,307.0	7,240.6	7,238.3	85.1	12.8	90.08	4,086.6	-1,098.4	471.3	376.7	94.63	4.981		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 13-9 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink 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		
8,800.0	7,307.0	7,270.2	7,269.2	33.9	12.7	90.26	1,516.8	-1,033.2	479.5	441.8	37.73	12.709		
8,900.0	7,307.0	7,270.8	7,269.9	35.0	12.7	90.41	1,516.8	-1,033.2	399.5	360.3	39.24	10.180		
9,000.0	7,307.0	7,271.5	7,270.6	36.2	12.7	90.56	1,516.8	-1,033.2	330.5	289.7	40.78	8.104		
9,100.0	7,307.0	7,272.2	7,271.3	37.4	12.7	90.72	1,516.8	-1,033.2	280.8	238.5	42.34	6.632		
9,200.0	7,307.0	7,273.0	7,272.0	38.7	12.7	90.87	1,516.8	-1,033.2	261.7	217.8	43.93	5.957		
9,201.9	7,307.0	7,273.0	7,272.0	38.7	12.7	90.88	1,516.8	-1,033.2	261.7	217.7	43.96	5.953 CC, ES, SF		
9,300.0	7,307.0	7,273.7	7,272.7	40.0	12.7	91.03	1,516.9	-1,033.2	279.5	233.9	45.52	6.139		
9,400.0	7,307.0	7,274.4	7,273.5	41.3	12.7	91.20	1,516.9	-1,033.2	328.2	281.1	47.14	6.963		
9,500.0	7,307.0	7,275.2	7,274.2	42.7	12.7	91.36	1,516.9	-1,033.3	396.7	347.9	48.76	8.134		
9,600.0	7,307.0	7,275.9	7,275.0	44.1	12.7	91.53	1,516.9	-1,033.3	476.4	426.0	50.40	9.452		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 14-9 (EXISTING) - ENCANA WELL - EXISTING - VES GYRO													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		
7,400.0	7,191.6	7,158.8	7,157.3	26.4	6.3	40.97	188.6	-1,121.3	472.7	451.8	20.90	22.616		
7,500.0	7,244.1	7,211.9	7,210.4	26.5	6.4	52.37	188.4	-1,123.1	396.8	377.8	19.03	20.849		
7,600.0	7,281.4	7,250.2	7,248.6	26.5	6.4	69.29	188.3	-1,124.6	317.3	298.4	18.89	16.799		
7,700.0	7,302.4	7,271.2	7,269.6	26.6	6.4	85.69	188.1	-1,125.5	241.6	222.0	19.61	12.320		
7,800.0	7,307.0	7,275.2	7,273.7	26.8	6.4	92.59	188.1	-1,125.6	184.5	164.4	20.11	9.173		
7,873.1	7,307.0	7,274.7	7,273.1	27.0	6.4	92.41	188.1	-1,125.6	169.4	148.9	20.53	8.251 CC, ES, SF		
7,900.0	7,307.0	7,274.5	7,272.9	27.1	6.4	92.35	188.1	-1,125.6	171.5	150.8	20.68	8.292		
8,000.0	7,307.0	7,273.8	7,272.2	27.5	6.4	92.10	188.1	-1,125.6	211.6	190.2	21.44	9.873		
8,100.0	7,307.0	7,273.1	7,271.5	28.0	6.4	91.86	188.1	-1,125.5	283.1	260.8	22.35	12.669		
8,200.0	7,307.0	7,272.4	7,270.8	28.6	6.4	91.63	188.1	-1,125.5	368.2	344.8	23.39	15.739		
8,300.0	7,307.0	7,271.7	7,270.1	29.3	6.4	91.39	188.1	-1,125.5	459.3	434.7	24.55	18.711		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 24-9 (EXISTING) - ENCANA WELL - EXISTING - VES GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-Gyro													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	92.37	-7.3	176.1	179.0					
100.0	100.0	68.4	68.4	0.1	0.1	92.37	-7.3	176.2	176.4	176.2	0.18	969.332 CC, ES		
200.0	200.0	167.7	167.7	0.3	0.1	92.37	-7.3	176.8	177.0	176.5	0.44	399.191		
300.0	300.0	268.5	268.5	0.5	0.2	-155.48	-7.1	177.4	178.0	177.3	0.71	252.243		
400.0	399.9	369.5	369.5	0.7	0.3	-156.08	-6.6	177.4	181.1	180.1	0.97	186.791		
500.0	499.7	469.1	469.1	0.9	0.4	-157.09	-6.0	177.1	187.2	185.9	1.24	151.490		
600.0	599.1	568.4	568.4	1.1	0.5	-158.27	-5.7	176.9	196.7	195.2	1.51	130.671		
700.0	698.2	667.5	667.5	1.4	0.6	-159.66	-5.5	176.8	209.6	207.8	1.78	117.793		
800.0	796.6	766.8	766.8	1.7	0.7	-161.23	-5.0	176.5	225.7	223.6	2.06	109.768		
900.0	894.6	864.5	864.5	2.1	0.8	-162.76	-4.7	175.9	244.3	241.9	2.33	104.767		
1,000.0	992.5	961.9	961.9	2.5	0.8	-164.12	-4.5	175.7	263.5	260.9	2.60	101.187		
1,100.0	1,090.4	1,058.7	1,058.7	2.9	0.9	-165.29	-4.2	175.6	283.1	280.2	2.87	98.509		
1,200.0	1,188.4	1,155.5	1,155.5	3.2	1.0	-166.27	-4.0	176.1	303.2	300.1	3.14	96.534		
1,300.0	1,286.3	1,253.6	1,253.5	3.6	1.1	-167.16	-3.7	176.7	323.6	320.2	3.41	94.952		
1,400.0	1,384.2	1,353.0	1,353.0	4.0	1.2	-168.07	-2.8	176.9	343.7	340.1	3.67	93.607		
1,500.0	1,482.2	1,451.0	1,451.0	4.4	1.3	-168.82	-2.3	176.7	363.5	359.6	3.94	92.373		
1,600.0	1,580.1	1,548.4	1,548.3	4.8	1.4	-169.46	-1.9	176.8	383.6	379.4	4.20	91.401		
1,700.0	1,678.0	1,647.4	1,647.3	5.2	1.4	-170.07	-1.3	176.8	403.6	399.2	4.46	90.516		
1,800.0	1,775.9	1,745.7	1,745.6	5.6	1.5	-170.53	-1.5	176.6	423.5	418.7	4.72	89.675		
1,900.0	1,873.9	1,843.8	1,843.8	6.0	1.6	-171.01	-1.1	176.4	443.3	438.4	4.98	88.970		
2,000.0	1,971.8	1,941.6	1,941.6	6.4	1.7	-171.41	-1.1	176.1	463.1	457.8	5.24	88.306		
2,100.0	2,069.7	2,039.2	2,039.1	6.8	1.8	-171.73	-1.4	176.2	483.1	477.6	5.51	87.756 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 24-9 J (EXISTING) - MACHII-ROSS WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8120-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	69.16	87.1	228.7	245.9					
100.0	100.0	76.0	76.0	0.1	0.1	69.16	87.1	228.7	244.7	244.4	0.26	959.481		
200.0	200.0	176.0	176.0	0.3	0.3	69.16	87.1	228.7	244.7	244.1	0.60	405.052 CC		
227.8	227.8	203.8	203.8	0.3	0.4	-178.57	87.1	228.7	244.8	244.0	0.70	349.119 ES		
300.0	300.0	276.0	276.0	0.5	0.5	-178.57	87.1	228.7	245.1	244.2	0.95	257.196		
400.0	399.9	375.9	375.9	0.7	0.7	-178.59	87.1	228.7	248.6	247.3	1.30	191.078		
500.0	499.7	475.7	475.7	0.9	0.8	-178.63	87.1	228.7	255.6	253.9	1.65	155.137		
600.0	599.1	575.1	575.1	1.1	1.0	-178.67	87.1	228.7	266.0	264.0	1.99	133.584		
700.0	698.2	674.2	674.2	1.4	1.2	-178.73	87.1	228.7	279.9	277.6	2.33	120.019		
800.0	796.6	772.6	772.6	1.7	1.3	-178.80	87.1	228.7	297.3	294.6	2.67	111.358		
900.0	894.6	870.6	870.6	2.1	1.5	-178.87	87.1	228.7	317.4	314.3	3.01	105.397		
1,000.0	992.5	968.5	968.5	2.5	1.7	-178.94	87.1	228.7	337.6	334.3	3.36	100.610		
1,100.0	1,090.4	1,066.4	1,066.4	2.9	1.9	-179.00	87.1	228.7	357.9	354.2	3.70	96.717		
1,200.0	1,188.4	1,164.4	1,164.4	3.2	2.0	-179.05	87.1	228.7	378.1	374.1	4.04	93.489		
1,300.0	1,286.3	1,262.3	1,262.3	3.6	2.2	-179.10	87.1	228.7	398.4	394.0	4.39	90.770		
1,400.0	1,384.2	1,360.2	1,360.2	4.0	2.4	-179.15	87.1	228.7	418.6	413.9	4.73	88.447		
1,500.0	1,482.2	1,458.2	1,458.2	4.4	2.5	-179.19	87.1	228.7	438.9	433.8	5.08	86.440		
1,600.0	1,580.1	1,556.1	1,556.1	4.8	2.7	-179.22	87.1	228.7	459.1	453.7	5.42	84.689		
1,700.0	1,678.0	1,654.0	1,654.0	5.2	2.9	-179.25	87.1	228.7	479.4	473.6	5.77	83.147		
1,800.0	1,775.9	1,751.9	1,751.9	5.6	3.1	-179.28	87.1	228.7	499.7	493.6	6.11	81.779 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVEYS														Offset Site Error:	0.0 ft
Survey Program: 79-Geolink 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	104.99	-73.2	273.4	283.6						
100.0	100.0	83.7	83.7	0.1	0.1	105.04	-73.4	273.1	282.8	282.6	0.25	1,125.882			
200.0	200.0	182.8	182.8	0.3	0.3	105.16	-73.9	272.7	282.6	282.0	0.60	471.972			
263.0	263.0	246.5	246.5	0.4	0.4	-142.47	-74.5	272.4	282.7	281.8	0.82	344.127			
300.0	300.0	284.4	284.4	0.5	0.5	-142.37	-75.0	272.1	282.6	281.6	0.95	296.578			
400.0	399.9	390.5	390.5	0.7	0.7	-142.54	-75.9	270.1	283.8	282.5	1.32	215.640			
500.0	499.7	502.5	502.3	0.9	0.9	-143.32	-75.3	264.6	284.4	282.7	1.70	167.651			
600.0	599.1	612.0	611.4	1.1	1.1	-144.37	-74.4	254.7	283.9	281.8	2.09	136.039			
700.0	698.2	719.6	718.1	1.4	1.4	-145.18	-76.1	241.1	283.4	280.9	2.50	113.364			
718.8	716.7	738.8	737.1	1.5	1.5	-145.25	-76.9	238.3	283.3	280.7	2.58	109.788			
800.0	796.6	821.2	818.4	1.7	1.7	-145.40	-81.8	225.8	284.1	281.2	2.94	96.533			
900.0	894.6	927.4	922.7	2.1	2.1	-145.35	-90.5	207.8	285.9	282.5	3.44	83.036			
1,000.0	992.5	1,033.4	1,026.1	2.5	2.5	-144.90	-100.7	187.0	285.4	281.4	3.99	71.543			
1,100.0	1,090.4	1,134.1	1,124.0	2.9	2.9	-144.29	-111.0	166.0	283.9	279.3	4.56	62.312			
1,200.0	1,188.4	1,233.2	1,220.2	3.2	3.4	-143.45	-122.3	145.1	282.4	277.2	5.16	54.714			
1,300.0	1,286.3	1,332.1	1,316.2	3.6	3.8	-142.36	-134.8	124.3	281.4	275.6	5.81	48.412			
1,400.0	1,384.2	1,431.1	1,412.0	4.0	4.3	-141.18	-147.7	103.7	280.7	274.2	6.50	43.210			
1,465.0	1,447.9	1,495.1	1,474.1	4.3	4.6	-140.41	-156.2	90.5	280.6	273.6	6.95	40.362			
1,500.0	1,482.2	1,529.5	1,507.5	4.4	4.7	-140.01	-160.6	83.6	280.6	273.4	7.20	38.985			
1,600.0	1,580.1	1,631.9	1,607.1	4.8	5.2	-139.09	-172.7	62.9	280.5	272.6	7.89	35.545			
1,700.0	1,678.0	1,734.1	1,706.4	5.2	5.6	-138.39	-183.4	41.7	279.5	270.9	8.58	32.554			
1,800.0	1,775.9	1,833.1	1,802.6	5.6	6.1	-137.63	-194.1	20.8	278.2	268.9	9.29	29.951			
1,900.0	1,873.9	1,931.5	1,898.4	6.0	6.5	-136.90	-204.7	0.7	277.6	267.6	9.99	27.786			
2,000.0	1,971.8	2,034.2	1,998.3	6.4	6.9	-136.23	-215.4	-20.3	277.0	266.3	10.72	25.845			
2,100.0	2,069.7	2,131.7	2,093.2	6.8	7.4	-135.59	-225.2	-40.8	275.7	264.3	11.42	24.136			
2,125.4	2,094.5	2,155.9	2,116.7	6.9	7.5	-135.46	-227.7	-45.6	275.7	264.1	11.60	23.769 CC			
2,200.0	2,167.6	2,227.9	2,187.0	7.2	7.8	-135.13	-234.8	-59.4	276.1	264.0	12.10	22.809			
2,300.0	2,265.6	2,331.5	2,288.3	7.6	8.2	-134.70	-244.8	-79.2	276.4	263.6	12.82	21.570			
2,400.0	2,363.5	2,431.3	2,385.6	8.0	8.6	-134.22	-254.4	-99.1	276.1	262.6	13.53	20.410			
2,455.6	2,417.9	2,486.2	2,439.1	8.2	8.9	-133.99	-259.6	-109.9	276.0	262.1	13.91	19.837			
2,500.0	2,461.4	2,530.3	2,482.3	8.4	9.1	-133.81	-263.8	-118.5	276.1	261.8	14.24	19.391			
2,600.0	2,559.3	2,628.7	2,578.1	8.8	9.5	-133.10	-274.6	-138.0	276.3	261.3	15.01	18.410			
2,700.0	2,657.3	2,730.1	2,676.8	9.2	9.9	-132.28	-286.3	-157.9	277.2	261.4	15.83	17.508			
2,774.6	2,730.3	2,805.3	2,749.8	9.5	10.3	-131.55	-295.2	-173.5	277.1	260.7	16.47	16.825			
2,800.0	2,755.2	2,830.1	2,773.9	9.6	10.4	-131.32	-298.1	-178.6	277.2	260.5	16.68	16.613			
2,900.0	2,853.1	2,928.2	2,869.4	10.0	10.8	-130.47	-309.6	-198.2	277.8	260.3	17.51	15.861			
3,000.0	2,951.0	3,028.3	2,966.8	10.4	11.3	-129.69	-321.0	-217.8	278.8	260.5	18.34	15.200			
3,100.0	3,049.0	3,129.1	3,065.1	10.8	11.7	-129.09	-331.8	-237.2	279.8	260.6	19.14	14.616			
3,200.0	3,146.9	3,229.4	3,162.8	11.2	12.1	-128.39	-342.6	-257.3	280.0	260.1	19.98	14.020 ES			
3,300.0	3,244.8	3,324.3	3,255.4	11.6	12.5	-127.81	-353.1	-275.1	281.7	260.9	20.76	13.571			
3,400.0	3,342.8	3,425.4	3,354.5	12.0	12.9	-127.45	-363.8	-292.6	284.4	262.9	21.52	13.217			
3,500.0	3,440.7	3,526.0	3,452.9	12.4	13.3	-127.15	-373.6	-310.8	286.0	263.8	22.27	12.845			
3,600.0	3,538.6	3,623.3	3,548.2	12.8	13.7	-126.85	-383.5	-327.9	288.3	265.3	23.00	12.534			
3,700.0	3,636.5	3,725.9	3,648.6	13.2	14.1	-126.49	-394.2	-345.9	290.7	266.9	23.79	12.219			
3,800.0	3,734.5	3,827.0	3,747.5	13.6	14.5	-126.18	-404.1	-364.4	292.3	267.7	24.54	11.910			
3,900.0	3,832.4	3,923.4	3,842.3	14.0	14.9	-126.33	-412.0	-380.3	294.4	269.2	25.15	11.707			
4,000.0	3,930.3	4,020.2	3,937.8	14.4	15.2	-126.87	-418.7	-394.4	297.7	272.0	25.64	11.610			
4,100.0	4,028.2	4,116.7	4,033.3	14.8	15.5	-127.76	-424.2	-406.6	302.0	276.0	26.02	11.606 SF			
4,200.0	4,126.2	4,212.4	4,128.3	15.2	15.7	-128.84	-429.3	-417.1	307.7	281.4	26.33	11.686			
4,300.0	4,224.1	4,309.3	4,224.7	15.6	15.9	-130.18	-433.6	-426.0	314.7	288.1	26.53	11.860			
4,400.0	4,322.0	4,404.3	4,319.4	16.0	16.1	-131.80	-436.3	-433.0	322.8	296.1	26.62	12.126			
4,500.0	4,419.9	4,496.3	4,411.3	16.4	16.2	-133.53	-438.4	-437.8	332.9	306.3	26.62	12.506			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 79-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
4,600.0	4,517.9	4,594.7	4,509.6	16.8	16.4	-135.51	-439.8	-441.1	344.7	318.1	26.53	12.992		
4,700.0	4,615.8	4,692.8	4,607.6	17.2	16.5	-137.41	-440.9	-444.3	356.8	330.4	26.43	13.501		
4,800.0	4,713.7	4,791.5	4,706.3	17.6	16.6	-139.25	-441.7	-447.4	369.4	343.1	26.32	14.034		
4,900.0	4,811.7	4,892.1	4,806.9	18.0	16.8	-141.01	-442.4	-450.8	382.1	355.9	26.22	14.573		
5,000.0	4,909.6	4,992.1	4,906.8	18.4	16.9	-142.73	-442.3	-454.5	394.5	368.4	26.11	15.112		
5,100.0	5,007.5	5,089.6	5,004.2	18.8	17.0	-144.33	-442.1	-458.2	407.3	381.3	26.01	15.661		
5,200.0	5,105.4	5,186.1	5,100.7	19.2	17.2	-145.87	-441.6	-461.3	420.7	394.8	25.91	16.241		
5,300.0	5,203.4	5,284.1	5,198.6	19.6	17.3	-147.37	-440.9	-464.1	434.8	409.0	25.81	16.844		
5,400.0	5,301.3	5,382.5	5,297.0	20.0	17.4	-148.77	-440.3	-467.0	449.2	423.4	25.75	17.446		
5,500.0	5,399.2	5,480.9	5,395.3	20.4	17.5	-150.08	-439.7	-469.8	463.8	438.1	25.70	18.046		
5,600.0	5,497.1	5,579.2	5,493.6	20.8	17.7	-151.33	-438.9	-472.7	478.6	452.9	25.67	18.644		
5,700.0	5,595.1	5,677.6	5,592.0	21.2	17.8	-152.50	-438.2	-475.5	493.7	468.0	25.66	19.235		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3AA-9H-N267 - 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							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.05	0.0	-10.0	10.0					
100.0	100.0	100.0	100.0	0.1	0.1	-90.05	0.0	-10.0	10.0	9.7	0.24	40.791	CC, ES	
200.0	200.0	200.0	200.0	0.3	0.3	-90.05	0.0	-10.0	10.0	9.4	0.59	16.796		
300.0	300.0	299.6	299.6	0.5	0.5	20.22	-0.6	-11.6	11.2	10.3	0.94	11.906		
400.0	399.9	399.2	399.1	0.7	0.7	18.93	-2.2	-16.5	12.9	11.6	1.29	10.014		
500.0	499.7	498.7	498.2	0.9	0.9	18.74	-5.0	-24.7	14.7	13.1	1.65	8.938		
600.0	599.1	598.2	596.9	1.1	1.2	19.32	-8.9	-36.1	16.5	14.5	2.01	8.232		
700.0	698.2	697.6	695.1	1.4	1.5	20.43	-13.9	-50.8	18.4	16.0	2.39	7.711		
800.0	796.6	796.9	792.6	1.7	1.8	21.90	-19.9	-68.7	20.3	17.5	2.79	7.282		
900.0	894.6	896.6	889.9	2.1	2.3	23.40	-26.9	-89.2	22.5	19.3	3.23	6.958		
1,000.0	992.5	996.6	987.4	2.5	2.7	24.57	-34.0	-110.2	24.7	21.1	3.69	6.706		
1,100.0	1,090.4	1,096.6	1,084.9	2.9	3.1	25.55	-41.1	-131.1	27.0	22.9	4.16	6.490		
1,200.0	1,188.4	1,196.6	1,182.4	3.2	3.5	26.38	-48.2	-152.1	29.3	24.6	4.65	6.303		
1,300.0	1,286.3	1,296.5	1,279.9	3.6	3.9	27.08	-55.3	-173.0	31.6	26.4	5.14	6.141		
1,400.0	1,384.2	1,396.5	1,377.4	4.0	4.4	27.70	-62.4	-194.0	33.9	28.2	5.64	6.001		
1,500.0	1,482.2	1,496.5	1,474.9	4.4	4.8	28.23	-69.6	-214.9	36.2	30.0	6.15	5.877		
1,600.0	1,580.1	1,596.4	1,572.4	4.8	5.2	28.70	-76.7	-235.9	38.5	31.8	6.66	5.769		
1,700.0	1,678.0	1,696.4	1,669.9	5.2	5.6	29.12	-83.8	-256.8	40.7	33.6	7.18	5.673		
1,800.0	1,775.9	1,796.4	1,767.4	5.6	6.1	29.49	-90.9	-277.8	43.0	35.3	7.70	5.588		
1,900.0	1,873.9	1,896.4	1,864.9	6.0	6.5	29.83	-98.0	-298.7	45.3	37.1	8.23	5.511		
2,000.0	1,971.8	1,996.3	1,962.4	6.4	6.9	30.13	-105.1	-319.7	47.6	38.9	8.75	5.443		
2,100.0	2,069.7	2,096.3	2,059.9	6.8	7.3	30.40	-112.2	-340.6	49.9	40.7	9.28	5.380		
2,200.0	2,167.6	2,196.3	2,157.4	7.2	7.8	30.66	-119.3	-361.6	52.2	42.4	9.81	5.324		
2,300.0	2,265.6	2,296.3	2,254.9	7.6	8.2	30.88	-126.4	-382.5	54.6	44.2	10.35	5.273		
2,400.0	2,363.5	2,396.2	2,352.3	8.0	8.6	31.10	-133.5	-403.5	56.9	46.0	10.88	5.226		
2,500.0	2,461.4	2,496.2	2,449.8	8.4	9.1	31.29	-140.6	-424.4	59.2	47.7	11.42	5.183		
2,600.0	2,559.3	2,596.2	2,547.3	8.8	9.5	31.47	-147.7	-445.4	61.5	49.5	11.95	5.143		
2,700.0	2,657.3	2,696.2	2,644.8	9.2	9.9	31.64	-154.9	-466.3	63.8	51.3	12.49	5.106		
2,800.0	2,755.2	2,796.1	2,742.3	9.6	10.4	31.79	-162.0	-487.3	66.1	53.1	13.03	5.072		
2,900.0	2,853.1	2,896.1	2,839.8	10.0	10.8	31.94	-169.1	-508.2	68.4	54.8	13.57	5.041		
3,000.0	2,951.0	2,996.1	2,937.3	10.4	11.2	32.07	-176.2	-529.1	70.7	56.6	14.11	5.011		
3,100.0	3,049.0	3,096.0	3,034.8	10.8	11.6	32.20	-183.3	-550.1	73.0	58.4	14.65	4.984		
3,200.0	3,146.9	3,196.0	3,132.3	11.2	12.1	32.32	-190.4	-571.0	75.3	60.1	15.19	4.958		
3,300.0	3,244.8	3,296.0	3,229.8	11.6	12.5	32.43	-197.5	-592.0	77.6	61.9	15.73	4.934		
3,400.0	3,342.8	3,396.0	3,327.3	12.0	12.9	32.54	-204.6	-612.9	79.9	63.7	16.27	4.912		
3,500.0	3,440.7	3,495.9	3,424.8	12.4	13.4	32.64	-211.7	-633.9	82.2	65.4	16.82	4.890		
3,600.0	3,538.6	3,595.9	3,522.3	12.8	13.8	32.73	-218.8	-654.8	84.6	67.2	17.36	4.870		
3,700.0	3,636.5	3,695.9	3,619.8	13.2	14.2	32.82	-225.9	-675.8	86.9	69.0	17.90	4.852		
3,800.0	3,734.5	3,795.9	3,717.3	13.6	14.7	32.90	-233.0	-696.7	89.2	70.7	18.45	4.834		
3,900.0	3,832.4	3,895.8	3,814.8	14.0	15.1	32.98	-240.1	-717.7	91.5	72.5	18.99	4.817		
4,000.0	3,930.3	3,995.8	3,912.3	14.4	15.5	33.06	-247.3	-738.6	93.8	74.3	19.54	4.801		
4,100.0	4,028.2	4,095.8	4,009.8	14.8	16.0	33.13	-254.4	-759.6	96.1	76.0	20.08	4.786		
4,200.0	4,126.2	4,195.7	4,107.3	15.2	16.4	33.20	-261.5	-780.5	98.4	77.8	20.63	4.771		
4,300.0	4,224.1	4,295.7	4,204.8	15.6	16.8	33.27	-268.6	-801.5	100.7	79.6	21.17	4.757		
4,400.0	4,322.0	4,395.7	4,302.3	16.0	17.2	33.33	-275.7	-822.4	103.0	81.3	21.72	4.744		
4,500.0	4,419.9	4,495.7	4,399.7	16.4	17.7	33.39	-282.8	-843.4	105.3	83.1	22.26	4.732		
4,600.0	4,517.9	4,595.6	4,497.2	16.8	18.1	33.45	-289.9	-864.3	107.7	84.8	22.81	4.720		
4,700.0	4,615.8	4,695.6	4,594.7	17.2	18.5	33.50	-297.0	-885.3	110.0	86.6	23.36	4.708		
4,800.0	4,713.7	4,795.6	4,692.2	17.6	19.0	33.56	-304.1	-906.2	112.3	88.4	23.90	4.697		
4,900.0	4,811.7	4,895.6	4,789.7	18.0	19.4	33.61	-311.2	-927.2	114.6	90.1	24.45	4.687		
5,000.0	4,909.6	4,995.5	4,887.2	18.4	19.8	33.66	-318.3	-948.1	116.9	91.9	25.00	4.677		
5,100.0	5,007.5	5,095.5	4,984.7	18.8	20.3	33.70	-325.4	-969.0	119.2	93.7	25.54	4.667		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3AA-9H-N267 - Hz - Plan #3													Offset Site Error:	0.0 ft
Survey Program: O-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		
5,200.0	5,105.4	5,195.5	5,082.2	19.2	20.7	33.75	-332.6	-990.0	121.5	95.4	26.09	4.658		
5,300.0	5,203.4	5,295.5	5,179.7	19.6	21.1	33.79	-339.7	-1,010.9	123.8	97.2	26.64	4.649		
5,400.0	5,301.3	5,395.4	5,277.2	20.0	21.6	33.83	-346.8	-1,031.9	126.1	99.0	27.18	4.641		
5,500.0	5,399.2	5,495.4	5,374.7	20.4	22.0	33.87	-353.9	-1,052.8	128.5	100.7	27.73	4.632		
5,600.0	5,497.1	5,595.4	5,472.2	20.8	22.4	33.91	-361.0	-1,073.8	130.8	102.5	28.28	4.624		
5,700.0	5,595.1	5,695.3	5,569.7	21.2	22.8	33.95	-368.1	-1,094.7	133.1	104.3	28.83	4.617		
5,800.0	5,693.0	5,795.3	5,667.2	21.6	23.3	33.99	-375.2	-1,115.7	135.4	106.0	29.37	4.609		
5,900.0	5,790.9	5,895.3	5,764.7	22.0	23.7	34.02	-382.3	-1,136.6	137.7	107.8	29.92	4.602		
6,000.0	5,888.8	5,995.3	5,862.2	22.4	24.1	34.06	-389.4	-1,157.6	140.0	109.6	30.47	4.595		
6,100.0	5,986.8	6,095.2	5,959.7	22.8	24.6	34.09	-396.5	-1,178.5	142.3	111.3	31.02	4.589		
6,200.0	6,084.7	6,195.2	6,057.2	23.2	25.0	34.12	-403.6	-1,199.5	144.6	113.1	31.57	4.582		
6,300.0	6,182.6	6,295.2	6,154.7	23.6	25.4	34.15	-410.7	-1,220.4	147.0	114.8	32.11	4.576		
6,400.0	6,280.5	6,395.2	6,252.2	24.0	25.9	34.18	-417.8	-1,241.4	149.3	116.6	32.66	4.570		
6,500.0	6,378.5	6,495.1	6,349.7	24.4	26.3	34.21	-425.0	-1,262.3	151.6	118.4	33.21	4.564		
6,600.0	6,476.4	6,595.1	6,447.1	24.8	26.7	34.24	-432.1	-1,283.3	153.9	120.1	33.76	4.559		
6,700.0	6,574.3	6,695.1	6,544.6	25.2	27.2	34.27	-439.2	-1,304.2	156.2	121.9	34.31	4.553		
6,800.0	6,672.3	6,795.1	6,642.1	25.6	27.6	34.29	-446.3	-1,325.2	158.5	123.7	34.86	4.548		
6,900.0	6,770.3	6,894.9	6,739.5	25.9	28.0	-2.58	-453.4	-1,346.1	160.0	125.4	34.52	4.633		
6,975.6	6,844.1	6,968.2	6,811.1	26.1	28.3	-36.30	-457.6	-1,361.4	159.7	127.4	32.27	4.948		
7,000.0	6,867.6	6,991.6	6,833.9	26.2	28.4	-44.04	-457.7	-1,366.4	159.7	128.3	31.45	5.079		
7,100.0	6,961.0	7,088.8	6,928.5	26.3	28.7	-66.40	-449.9	-1,386.7	161.6	133.5	28.11	5.750		
7,200.0	7,047.9	7,188.4	7,023.5	26.4	29.0	-81.68	-428.3	-1,407.1	167.2	141.4	25.81	6.479		
7,300.0	7,125.6	7,291.2	7,117.5	26.4	29.2	-93.98	-392.2	-1,427.3	177.5	152.5	24.99	7.103		
7,400.0	7,191.6	7,398.0	7,208.8	26.4	29.4	-104.34	-340.5	-1,446.9	192.9	168.0	24.92	7.742		
7,500.0	7,244.1	7,509.8	7,295.2	26.5	29.5	-113.04	-272.1	-1,465.5	213.2	188.6	24.61	8.661		
7,600.0	7,281.4	7,627.9	7,373.9	26.5	29.7	-120.22	-185.9	-1,482.4	237.3	213.6	23.68	10.023		
7,700.0	7,302.4	7,753.8	7,441.4	26.6	29.9	-126.06	-80.9	-1,496.9	264.1	241.7	22.42	11.781		
7,800.0	7,307.0	7,889.4	7,492.8	26.8	30.1	-131.10	43.9	-1,507.9	291.5	269.9	21.65	13.468		
7,900.0	7,307.0	8,039.3	7,521.9	27.1	30.5	-134.41	190.6	-1,514.2	308.0	285.9	22.11	13.932		
8,000.0	7,307.0	8,163.8	7,525.0	27.5	30.9	-134.74	315.0	-1,514.8	309.7	286.3	23.38	13.248		
8,100.0	7,307.0	8,263.8	7,525.0	28.0	31.4	-134.74	415.0	-1,514.8	309.7	284.9	24.77	12.501		
8,200.0	7,307.0	8,363.8	7,525.0	28.6	31.9	-134.74	515.0	-1,514.8	309.7	283.4	26.34	11.760		
8,300.0	7,307.0	8,463.8	7,525.0	29.3	32.5	-134.74	615.0	-1,514.8	309.7	281.7	28.03	11.047		
8,400.0	7,307.0	8,563.8	7,525.0	30.1	33.2	-134.74	715.0	-1,514.8	309.7	279.9	29.85	10.376		
8,500.0	7,307.0	8,663.8	7,525.0	30.9	34.0	-134.74	815.0	-1,514.8	309.7	277.9	31.76	9.753		
8,600.0	7,307.0	8,763.8	7,525.0	31.9	34.8	-134.74	915.0	-1,514.8	309.7	276.0	33.74	9.178		
8,700.0	7,307.0	8,863.8	7,525.0	32.9	35.8	-134.74	1,015.0	-1,514.8	309.7	273.9	35.79	8.652		
8,800.0	7,307.0	8,963.8	7,525.0	33.9	36.7	-134.74	1,115.0	-1,514.8	309.7	271.8	37.90	8.171		
8,900.0	7,307.0	9,063.8	7,525.0	35.0	37.8	-134.74	1,215.0	-1,514.8	309.7	269.6	40.05	7.732		
9,000.0	7,307.0	9,163.8	7,525.0	36.2	38.8	-134.74	1,315.0	-1,514.8	309.7	267.5	42.25	7.331		
9,100.0	7,307.0	9,263.8	7,525.0	37.4	40.0	-134.74	1,415.0	-1,514.8	309.7	265.2	44.47	6.964		
9,200.0	7,307.0	9,363.8	7,525.0	38.7	41.1	-134.74	1,515.0	-1,514.8	309.7	263.0	46.72	6.628		
9,300.0	7,307.0	9,463.8	7,525.0	40.0	42.4	-134.74	1,615.0	-1,514.8	309.7	260.7	49.00	6.320		
9,400.0	7,307.0	9,563.8	7,525.0	41.3	43.6	-134.74	1,715.0	-1,514.8	309.7	258.4	51.30	6.037		
9,500.0	7,307.0	9,663.8	7,525.0	42.7	44.9	-134.74	1,815.0	-1,514.8	309.7	256.1	53.62	5.776		
9,600.0	7,307.0	9,763.8	7,525.0	44.1	46.2	-134.74	1,915.0	-1,514.8	309.7	253.7	55.96	5.535		
9,700.0	7,307.0	9,863.8	7,525.0	45.5	47.6	-134.74	2,015.0	-1,514.8	309.7	251.4	58.30	5.312		
9,800.0	7,307.0	9,963.8	7,525.0	46.9	48.9	-134.74	2,115.0	-1,514.8	309.7	249.0	60.67	5.105		
9,900.0	7,307.0	10,063.8	7,525.0	48.4	50.3	-134.74	2,215.0	-1,514.8	309.7	246.7	63.04	4.913		
10,000.0	7,307.0	10,163.8	7,525.0	49.8	51.8	-134.74	2,315.0	-1,514.8	309.7	244.3	65.42	4.734		
10,100.0	7,307.0	10,263.8	7,525.0	51.3	53.2	-134.74	2,415.0	-1,514.8	309.7	241.9	67.81	4.567		
10,200.0	7,307.0	10,363.8	7,525.0	52.9	54.7	-134.74	2,515.0	-1,514.8	309.7	239.5	70.21	4.411		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3AA-9H-N267 - 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							
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	7,307.0	10,463.8	7,525.0	54.4	56.1	-134.74	2,615.0	-1,514.8	309.7	237.1	72.62	4.265		
10,400.0	7,307.0	10,563.8	7,525.0	55.9	57.6	-134.74	2,715.0	-1,514.8	309.7	234.7	75.03	4.127		
10,500.0	7,307.0	10,663.8	7,525.0	57.5	59.1	-134.74	2,815.0	-1,514.8	309.7	232.2	77.45	3.999		
10,600.0	7,307.0	10,763.8	7,525.0	59.0	60.7	-134.74	2,915.0	-1,514.8	309.7	229.8	79.88	3.877		
10,700.0	7,307.0	10,863.8	7,525.0	60.6	62.2	-134.74	3,015.0	-1,514.8	309.7	227.4	82.31	3.763		
10,800.0	7,307.0	10,963.8	7,525.0	62.2	63.7	-134.74	3,115.0	-1,514.8	309.7	225.0	84.74	3.655		
10,900.0	7,307.0	11,063.8	7,525.0	63.8	65.3	-134.74	3,215.0	-1,514.8	309.7	222.5	87.18	3.552		
11,000.0	7,307.0	11,163.8	7,525.0	65.4	66.9	-134.74	3,315.0	-1,514.8	309.7	220.1	89.62	3.456		
11,100.0	7,307.0	11,263.8	7,525.0	67.0	68.4	-134.74	3,415.0	-1,514.8	309.7	217.6	92.07	3.364		
11,200.0	7,307.0	11,363.8	7,525.0	68.6	70.0	-134.74	3,515.0	-1,514.8	309.7	215.2	94.52	3.277		
11,300.0	7,307.0	11,463.8	7,525.0	70.2	71.6	-134.74	3,615.0	-1,514.8	309.7	212.7	96.97	3.194		
11,400.0	7,307.0	11,563.8	7,525.0	71.9	73.2	-134.74	3,715.0	-1,514.8	309.7	210.3	99.42	3.115		
11,500.0	7,307.0	11,663.8	7,525.0	73.5	74.8	-134.74	3,815.0	-1,514.8	309.7	207.8	101.88	3.040		
11,600.0	7,307.0	11,763.8	7,525.0	75.1	76.4	-134.74	3,915.0	-1,514.8	309.7	205.4	104.34	2.968		
11,700.0	7,307.0	11,863.8	7,525.0	76.8	78.0	-134.74	4,015.0	-1,514.8	309.7	202.9	106.80	2.900		
11,800.0	7,307.0	11,963.8	7,525.0	78.4	79.7	-134.74	4,115.0	-1,514.8	309.7	200.4	109.27	2.834		
11,900.0	7,307.0	12,063.8	7,525.0	80.1	81.3	-134.74	4,215.0	-1,514.8	309.7	198.0	111.73	2.772		
12,000.0	7,307.0	12,163.8	7,525.0	81.7	82.9	-134.74	4,315.0	-1,514.8	309.7	195.5	114.20	2.712		
12,100.0	7,307.0	12,263.8	7,525.0	83.4	84.6	-134.74	4,415.0	-1,514.8	309.7	193.0	116.67	2.655		
12,200.0	7,307.0	12,363.8	7,525.0	85.1	86.2	-134.74	4,515.0	-1,514.8	309.7	190.6	119.14	2.600		
12,300.0	7,307.0	12,463.8	7,525.0	86.7	87.9	-134.74	4,615.0	-1,514.8	309.7	188.1	121.61	2.547		
12,400.0	7,307.0	12,563.8	7,525.0	88.4	89.5	-134.74	4,715.0	-1,514.8	309.7	185.6	124.08	2.496		
12,500.0	7,307.0	12,663.8	7,525.0	90.1	91.2	-134.74	4,815.0	-1,514.8	309.7	183.1	126.56	2.447		
12,600.0	7,307.0	12,763.8	7,525.0	91.8	92.8	-134.74	4,915.0	-1,514.8	309.7	180.7	129.03	2.400		
12,700.0	7,307.0	12,863.8	7,525.0	93.5	94.5	-134.74	5,015.0	-1,514.8	309.7	178.2	131.51	2.355		
12,800.0	7,307.0	12,963.8	7,525.0	95.1	96.2	-134.74	5,115.0	-1,514.8	309.7	175.7	133.99	2.311		
12,900.0	7,307.0	13,063.8	7,525.0	96.8	97.8	-134.74	5,215.0	-1,514.8	309.7	173.2	136.47	2.269		
12,923.4	7,307.0	13,087.3	7,525.0	97.2	98.2	-134.74	5,238.4	-1,514.8	309.7	172.6	137.05	2.260 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3B-9H-N267 - Hz - Plan #4													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		
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	11.2	11.2					
100.0	100.0	100.0	100.0	0.1	0.1	90.04	0.0	11.2	11.2	10.9	0.24	45.763		
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	11.2	11.2	10.6	0.59	18.844 CC		
228.0	228.0	228.0	228.0	0.3	0.3	-157.82	0.0	11.2	11.2	10.6	0.69	16.273 ES		
300.0	300.0	300.0	300.0	0.5	0.5	-158.50	0.0	11.2	11.6	10.6	0.94	12.295		
400.0	399.9	400.4	400.4	0.7	0.6	-160.92	-0.8	9.6	13.2	12.0	1.29	10.249		
500.0	499.7	500.8	500.7	0.9	0.8	-162.18	-3.0	4.8	15.0	13.3	1.65	9.094		
600.0	599.1	601.3	600.8	1.1	1.1	-162.62	-6.7	-3.2	16.7	14.7	2.01	8.345		
700.0	698.2	701.9	700.6	1.4	1.3	-162.47	-11.9	-14.3	18.5	16.2	2.37	7.804		
800.0	796.6	802.5	799.9	1.7	1.6	-161.88	-18.6	-28.7	20.4	17.6	2.76	7.378		
900.0	894.6	902.4	898.4	2.1	2.0	-162.14	-25.9	-44.3	23.3	20.2	3.15	7.401		
1,000.0	992.5	1,002.4	996.8	2.5	2.3	-162.47	-33.2	-60.0	26.5	22.9	3.55	7.469		
1,100.0	1,090.4	1,102.3	1,095.3	2.9	2.6	-162.73	-40.5	-75.6	29.6	25.7	3.94	7.521		
1,200.0	1,188.4	1,202.3	1,193.7	3.2	3.0	-162.95	-47.8	-91.3	32.8	28.5	4.34	7.563		
1,300.0	1,286.3	1,302.2	1,292.2	3.6	3.3	-163.12	-55.1	-106.9	35.9	31.2	4.73	7.597		
1,400.0	1,384.2	1,402.2	1,390.6	4.0	3.6	-163.27	-62.4	-122.6	39.1	34.0	5.13	7.626		
1,500.0	1,482.2	1,502.1	1,489.0	4.4	4.0	-163.39	-69.7	-138.3	42.3	36.7	5.52	7.650		
1,600.0	1,580.1	1,602.1	1,587.5	4.8	4.3	-163.50	-77.0	-153.9	45.4	39.5	5.92	7.671		
1,700.0	1,678.0	1,702.0	1,685.9	5.2	4.7	-163.60	-84.3	-169.6	48.6	42.2	6.32	7.689		
1,800.0	1,775.9	1,802.0	1,784.4	5.6	5.0	-163.68	-91.6	-185.2	51.7	45.0	6.71	7.705		
1,900.0	1,873.9	1,901.9	1,882.8	6.0	5.4	-163.75	-98.9	-200.9	54.9	47.8	7.11	7.719		
2,000.0	1,971.8	2,001.9	1,981.3	6.4	5.7	-163.82	-106.2	-216.5	58.0	50.5	7.51	7.732		
2,100.0	2,069.7	2,101.8	2,079.7	6.8	6.1	-163.87	-113.5	-232.2	61.2	53.3	7.90	7.743		
2,200.0	2,167.6	2,201.8	2,178.2	7.2	6.4	-163.93	-120.8	-247.8	64.3	56.0	8.30	7.753		
2,300.0	2,265.6	2,301.7	2,276.6	7.6	6.8	-163.97	-128.1	-263.5	67.5	58.8	8.70	7.763		
2,400.0	2,363.5	2,401.7	2,375.1	8.0	7.1	-164.02	-135.4	-279.2	70.7	61.6	9.09	7.771		
2,500.0	2,461.4	2,501.6	2,473.5	8.4	7.5	-164.06	-142.7	-294.8	73.8	64.3	9.49	7.779		
2,600.0	2,559.3	2,601.6	2,572.0	8.8	7.8	-164.09	-150.0	-310.5	77.0	67.1	9.89	7.786		
2,700.0	2,657.3	2,701.5	2,670.4	9.2	8.2	-164.13	-157.2	-326.1	80.1	69.8	10.28	7.793		
2,800.0	2,755.2	2,801.5	2,768.8	9.6	8.5	-164.16	-164.5	-341.8	83.3	72.6	10.68	7.799		
2,900.0	2,853.1	2,901.4	2,867.3	10.0	8.9	-164.19	-171.8	-357.4	86.4	75.4	11.08	7.804		
3,000.0	2,951.0	3,001.4	2,965.7	10.4	9.2	-164.21	-179.1	-373.1	89.6	78.1	11.47	7.810		
3,100.0	3,049.0	3,101.3	3,064.2	10.8	9.6	-164.24	-186.4	-388.8	92.8	80.9	11.87	7.814		
3,200.0	3,146.9	3,201.3	3,162.6	11.2	9.9	-164.26	-193.7	-404.4	95.9	83.6	12.27	7.819		
3,300.0	3,244.8	3,301.2	3,261.1	11.6	10.3	-164.28	-201.0	-420.1	99.1	86.4	12.66	7.823		
3,400.0	3,342.8	3,401.2	3,359.5	12.0	10.6	-164.30	-208.3	-435.7	102.2	89.2	13.06	7.827		
3,500.0	3,440.7	3,501.1	3,458.0	12.4	11.0	-164.32	-215.6	-451.4	105.4	91.9	13.46	7.831		
3,600.0	3,538.6	3,601.1	3,556.4	12.8	11.3	-164.34	-222.9	-467.0	108.5	94.7	13.85	7.835		
3,700.0	3,636.5	3,701.1	3,654.9	13.2	11.7	-164.36	-230.2	-482.7	111.7	97.4	14.25	7.838		
3,800.0	3,734.5	3,801.0	3,753.3	13.6	12.0	-164.37	-237.5	-498.3	114.9	100.2	14.65	7.841		
3,900.0	3,832.4	3,901.0	3,851.8	14.0	12.4	-164.39	-244.8	-514.0	118.0	103.0	15.04	7.844		
4,000.0	3,930.3	4,000.9	3,950.2	14.4	12.7	-164.40	-252.1	-529.7	121.2	105.7	15.44	7.847		
4,100.0	4,028.2	4,100.9	4,048.6	14.8	13.1	-164.42	-259.4	-545.3	124.3	108.5	15.84	7.850		
4,200.0	4,126.2	4,200.8	4,147.1	15.2	13.4	-164.43	-266.7	-561.0	127.5	111.2	16.23	7.852		
4,300.0	4,224.1	4,300.8	4,245.5	15.6	13.8	-164.44	-274.0	-576.6	130.6	114.0	16.63	7.855		
4,400.0	4,322.0	4,400.7	4,344.0	16.0	14.1	-164.45	-281.3	-592.3	133.8	116.8	17.03	7.857		
4,500.0	4,419.9	4,500.7	4,442.4	16.4	14.5	-164.47	-288.6	-607.9	137.0	119.5	17.43	7.859		
4,600.0	4,517.9	4,600.6	4,540.9	16.8	14.8	-164.48	-295.9	-623.6	140.1	122.3	17.82	7.862		
4,700.0	4,615.8	4,700.6	4,639.3	17.2	15.2	-164.49	-303.2	-639.3	143.3	125.0	18.22	7.864		
4,800.0	4,713.7	4,800.5	4,737.8	17.6	15.5	-164.50	-310.5	-654.9	146.4	127.8	18.62	7.866		
4,900.0	4,811.7	4,900.5	4,836.2	18.0	15.9	-164.51	-317.8	-670.6	149.6	130.6	19.01	7.868		
5,000.0	4,909.6	5,000.4	4,934.7	18.4	16.2	-164.51	-325.1	-686.2	152.7	133.3	19.41	7.869		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3B-9H-N267 - Hz - Plan #4													Offset Site Error: 0.0 ft	
Survey Program: O-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		
5,100.0	5,007.5	5,100.4	5,033.1	18.8	16.6	-164.52	-332.4	-701.9	155.9	136.1	19.81	7.871		
5,200.0	5,105.4	5,200.3	5,131.6	19.2	17.0	-164.53	-339.7	-717.5	159.1	138.9	20.20	7.873		
5,300.0	5,203.4	5,300.3	5,230.0	19.6	17.3	-164.54	-347.0	-733.2	162.2	141.6	20.60	7.874		
5,400.0	5,301.3	5,400.2	5,328.4	20.0	17.7	-164.55	-354.3	-748.9	165.4	144.4	21.00	7.876		
5,500.0	5,399.2	5,500.2	5,426.9	20.4	18.0	-164.55	-361.6	-764.5	168.5	147.1	21.39	7.877		
5,600.0	5,497.1	5,600.1	5,525.3	20.8	18.4	-164.56	-368.9	-780.2	171.7	149.9	21.79	7.879		
5,700.0	5,595.1	5,700.1	5,623.8	21.2	18.7	-164.57	-376.2	-795.8	174.8	152.7	22.19	7.880		
5,800.0	5,693.0	5,800.0	5,722.2	21.6	19.1	-164.58	-383.5	-811.5	178.0	155.4	22.58	7.881		
5,900.0	5,790.9	5,900.0	5,820.7	22.0	19.4	-164.58	-390.8	-827.1	181.2	158.2	22.98	7.883		
6,000.0	5,888.8	5,999.9	5,919.1	22.4	19.8	-164.59	-398.1	-842.8	184.3	160.9	23.38	7.884		
6,100.0	5,986.8	6,099.9	6,017.6	22.8	20.1	-164.59	-405.4	-858.4	187.5	163.7	23.77	7.885		
6,200.0	6,084.7	6,199.8	6,116.0	23.2	20.5	-164.60	-412.7	-874.1	190.6	166.5	24.17	7.886		
6,300.0	6,182.6	6,299.8	6,214.5	23.6	20.8	-164.61	-420.0	-889.8	193.8	169.2	24.57	7.888		
6,400.0	6,280.5	6,399.7	6,312.9	24.0	21.2	-164.61	-427.3	-905.4	196.9	172.0	24.96	7.889		
6,500.0	6,378.5	6,499.7	6,411.4	24.4	21.5	-164.62	-434.6	-921.1	200.1	174.7	25.36	7.890		
6,600.0	6,476.4	6,599.6	6,509.8	24.8	21.9	-164.62	-441.9	-936.7	203.3	177.5	25.76	7.891		
6,700.0	6,574.3	6,699.6	6,608.2	25.2	22.2	-164.63	-449.2	-952.4	206.4	180.3	26.16	7.892		
6,800.0	6,672.3	6,799.5	6,706.7	25.6	22.6	-164.63	-456.5	-968.0	209.6	183.0	26.55	7.893		
6,900.0	6,770.3	6,899.3	6,805.0	25.9	22.9	160.89	-463.8	-983.7	212.3	185.0	27.23	7.795		
7,000.0	6,867.6	6,997.0	6,901.2	26.2	23.3	130.83	-470.9	-999.0	214.4	185.2	29.27	7.327		
7,100.0	6,961.0	7,094.2	6,997.1	26.3	23.6	123.82	-472.9	-1,014.2	219.8	187.9	31.93	6.886		
7,200.0	7,047.9	7,197.5	7,097.9	26.4	23.7	124.30	-457.5	-1,030.3	229.7	196.2	33.46	6.865		
7,300.0	7,125.6	7,308.1	7,200.8	26.4	23.8	127.15	-421.0	-1,046.6	242.9	209.6	33.32	7.289		
7,400.0	7,191.6	7,427.0	7,301.5	26.4	23.8	130.54	-360.3	-1,062.6	257.8	226.2	31.56	8.168		
7,500.0	7,244.1	7,554.8	7,393.4	26.5	23.8	133.69	-273.1	-1,077.3	272.4	243.7	28.69	9.495		
7,600.0	7,281.4	7,691.4	7,468.0	26.5	23.8	136.22	-159.7	-1,089.1	284.9	259.2	25.67	11.096		
7,700.0	7,302.4	7,835.4	7,515.7	26.6	23.9	137.90	-24.5	-1,096.7	293.3	269.4	23.83	12.308		
7,800.0	7,307.0	7,975.8	7,529.0	26.8	24.2	138.55	115.0	-1,098.8	296.2	272.0	24.16	12.261		
7,900.0	7,307.0	8,075.8	7,529.0	27.1	24.5	138.55	215.0	-1,098.8	296.2	271.2	24.97	11.859		
8,000.0	7,307.0	8,175.8	7,529.0	27.5	24.9	138.55	315.0	-1,098.8	296.2	270.2	25.97	11.403		
8,100.0	7,307.0	8,275.8	7,529.0	28.0	25.5	138.55	415.0	-1,098.8	296.2	269.0	27.14	10.915		
8,200.0	7,307.0	8,375.8	7,529.0	28.6	26.2	138.55	515.0	-1,098.8	296.2	267.7	28.44	10.413		
8,300.0	7,307.0	8,475.8	7,529.0	29.3	26.9	138.55	615.0	-1,098.8	296.2	266.3	29.88	9.912		
8,400.0	7,307.0	8,575.8	7,529.0	30.1	27.8	138.55	715.0	-1,098.8	296.2	264.8	31.42	9.425		
8,500.0	7,307.0	8,675.8	7,529.0	30.9	28.7	138.55	815.0	-1,098.8	296.2	263.1	33.06	8.959		
8,600.0	7,307.0	8,775.8	7,529.0	31.9	29.7	138.55	915.0	-1,098.8	296.2	261.4	34.78	8.516		
8,700.0	7,307.0	8,875.8	7,529.0	32.9	30.8	138.55	1,015.0	-1,098.8	296.2	259.6	36.57	8.100		
8,800.0	7,307.0	8,975.8	7,529.0	33.9	31.9	138.55	1,115.0	-1,098.8	296.2	257.8	38.41	7.710		
8,900.0	7,307.0	9,075.8	7,529.0	35.0	33.1	138.55	1,215.0	-1,098.8	296.2	255.9	40.31	7.347		
9,000.0	7,307.0	9,175.8	7,529.0	36.2	34.4	138.55	1,315.0	-1,098.8	296.2	253.9	42.25	7.009		
9,100.0	7,307.0	9,275.8	7,529.0	37.4	35.6	138.55	1,415.0	-1,098.8	296.2	251.9	44.24	6.695		
9,165.8	7,307.0	9,341.6	7,529.0	38.2	36.5	138.55	1,480.8	-1,098.8	296.2	250.6	45.56	6.501		
9,200.0	7,307.0	9,374.8	7,529.0	38.7	37.0	138.55	1,514.0	-1,098.8	296.2	250.0	46.24	6.405		
9,300.0	7,307.0	9,468.4	7,529.0	40.0	38.2	138.26	1,607.5	-1,096.8	297.6	249.2	48.41	6.148		
9,400.0	7,307.0	9,566.6	7,529.0	41.3	39.5	137.63	1,705.7	-1,092.4	300.6	249.7	50.91	5.905		
9,500.0	7,307.0	9,666.5	7,529.0	42.7	40.9	137.00	1,805.5	-1,087.8	303.7	250.2	53.51	5.676		
9,600.0	7,307.0	9,766.4	7,529.0	44.1	42.3	136.37	1,905.3	-1,083.2	306.9	250.7	56.17	5.463		
9,700.0	7,307.0	9,866.3	7,529.0	45.5	43.7	135.76	2,005.1	-1,078.7	310.0	251.1	58.89	5.265		
9,800.0	7,307.0	9,966.2	7,529.0	46.9	45.2	135.16	2,104.9	-1,074.1	313.2	251.6	61.66	5.080		
9,900.0	7,307.0	10,066.1	7,529.0	48.4	46.7	134.57	2,204.6	-1,069.5	316.5	252.0	64.48	4.908		
10,000.0	7,307.0	10,166.0	7,529.0	49.8	48.2	134.00	2,304.4	-1,065.0	319.8	252.4	67.35	4.748		
10,100.0	7,307.0	10,265.9	7,529.0	51.3	49.7	133.43	2,404.2	-1,060.4	323.1	252.8	70.26	4.598		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3B-9H-N267 - Hz - Plan #4													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
10,200.0	7,307.0	10,365.8	7,529.0	52.9	51.2	132.88	2,504.0	-1,055.8	326.4	253.2	73.21	4.459		
10,300.0	7,307.0	10,465.7	7,529.0	54.4	52.7	132.34	2,603.8	-1,051.2	329.8	253.6	76.20	4.328		
10,400.0	7,307.0	10,565.6	7,529.0	55.9	54.3	131.81	2,703.6	-1,046.7	333.2	254.0	79.23	4.205		
10,500.0	7,307.0	10,665.5	7,529.0	57.5	55.8	131.29	2,803.4	-1,042.1	336.6	254.3	82.29	4.091		
10,600.0	7,307.0	10,765.4	7,529.0	59.0	57.4	130.78	2,903.2	-1,037.5	340.1	254.7	85.38	3.983		
10,700.0	7,307.0	10,865.3	7,529.0	60.6	59.0	130.28	3,003.0	-1,032.9	343.6	255.1	88.51	3.882		
10,800.0	7,307.0	10,965.2	7,529.0	62.2	60.6	129.79	3,102.8	-1,028.4	347.1	255.4	91.66	3.787		
10,900.0	7,307.0	11,065.1	7,529.0	63.8	62.2	129.32	3,202.5	-1,023.8	350.6	255.8	94.83	3.697		
11,000.0	7,307.0	11,165.0	7,529.0	65.4	63.8	128.85	3,302.3	-1,019.2	354.2	256.1	98.04	3.613		
11,100.0	7,307.0	11,264.9	7,529.0	67.0	65.4	128.39	3,402.1	-1,014.6	357.7	256.5	101.26	3.533		
11,200.0	7,307.0	11,364.7	7,529.0	68.6	67.1	127.94	3,501.9	-1,010.1	361.3	256.8	104.51	3.458		
11,300.0	7,307.0	11,464.6	7,529.0	70.2	68.7	127.49	3,601.7	-1,005.5	365.0	257.2	107.78	3.386		
11,400.0	7,307.0	11,564.5	7,529.0	71.9	70.3	127.06	3,701.5	-1,000.9	368.6	257.5	111.06	3.319		
11,500.0	7,307.0	11,672.6	7,529.0	73.5	72.1	126.70	3,809.5	-997.0	371.5	257.1	114.39	3.248		
11,600.0	7,307.0	11,784.2	7,529.0	75.1	74.0	126.71	3,921.1	-997.2	371.4	254.1	117.29	3.166		
11,700.0	7,307.0	11,895.7	7,529.0	76.8	75.9	127.13	4,032.4	-1,001.6	368.2	248.6	119.62	3.078		
11,800.0	7,307.0	11,995.9	7,529.0	78.4	77.6	127.71	4,132.5	-1,007.8	363.4	241.8	121.51	2.990		
11,900.0	7,307.0	12,095.8	7,529.0	80.1	79.3	128.31	4,232.2	-1,013.8	358.5	235.2	123.33	2.907		
12,000.0	7,307.0	12,195.6	7,529.0	81.7	81.0	128.92	4,331.8	-1,019.9	353.8	228.7	125.07	2.829		
12,100.0	7,307.0	12,295.4	7,529.0	83.4	82.7	129.55	4,431.4	-1,026.0	349.0	222.3	126.72	2.754		
12,200.0	7,307.0	12,395.2	7,529.0	85.1	84.4	130.20	4,531.0	-1,032.1	344.3	216.1	128.28	2.684		
12,300.0	7,307.0	12,495.0	7,529.0	86.7	86.1	130.86	4,630.7	-1,038.2	339.7	209.9	129.76	2.618		
12,400.0	7,307.0	12,594.8	7,529.0	88.4	87.8	131.54	4,730.3	-1,044.3	335.1	204.0	131.13	2.556		
12,500.0	7,307.0	12,694.6	7,529.0	90.1	89.5	132.24	4,829.9	-1,050.4	330.6	198.2	132.40	2.497		
12,600.0	7,307.0	12,794.4	7,529.0	91.8	91.3	132.96	4,929.6	-1,056.5	326.1	192.5	133.55	2.441		
12,700.0	7,307.0	12,894.3	7,529.0	93.5	93.0	133.70	5,029.2	-1,062.6	321.6	187.0	134.60	2.389		
12,800.0	7,307.0	12,994.1	7,529.0	95.1	94.7	134.47	5,128.8	-1,068.7	317.2	181.7	135.52	2.341		
12,900.0	7,307.0	13,093.9	7,529.0	96.8	96.4	135.25	5,228.4	-1,074.8	312.9	176.6	136.31	2.295		
12,919.8	7,307.0	13,100.2	7,529.0	97.2	96.5	135.30	5,234.8	-1,075.2	312.3	175.8	136.52	2.288		
12,923.4	7,307.0	13,100.2	7,529.0	97.2	96.5	135.30	5,234.8	-1,075.2	312.4	175.8	136.57	2.287 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3C-9H-N267 - Hz - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-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)				
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	19.6	19.6					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	19.6	19.6	19.3	0.24	80.085		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	19.6	19.6	19.0	0.59	32.976 CC		
227.9	227.9	227.9	227.9	0.3	0.3	-157.75	0.0	19.6	19.6	18.9	0.69	28.419 ES		
300.0	300.0	300.0	300.0	0.5	0.5	-158.15	0.0	19.6	20.0	19.0	0.94	21.193		
400.0	399.9	399.9	399.9	0.7	0.6	-161.33	0.0	19.6	23.2	22.0	1.29	18.002		
500.0	499.7	500.1	500.1	0.9	0.8	-164.88	-0.5	18.8	29.1	27.5	1.64	17.766		
600.0	599.1	600.4	600.3	1.1	1.0	-167.37	-1.9	16.6	36.9	34.9	1.99	18.553		
700.0	698.2	700.6	700.4	1.4	1.2	-169.02	-4.2	12.9	46.5	44.2	2.34	19.892		
800.0	796.6	800.8	800.4	1.7	1.4	-170.10	-7.5	7.7	57.9	55.2	2.69	21.559		
900.0	894.6	901.0	900.4	2.1	1.6	-170.73	-11.7	1.1	70.4	67.3	3.04	23.140		
1,000.0	992.5	1,001.7	1,000.6	2.5	1.8	-170.81	-16.9	-7.1	81.4	78.0	3.41	23.909		
1,100.0	1,090.4	1,102.7	1,100.9	2.9	2.1	-170.49	-23.0	-16.8	90.8	87.0	3.78	24.047		
1,200.0	1,188.4	1,204.0	1,201.3	3.2	2.3	-169.88	-30.1	-28.0	98.5	94.4	4.16	23.709		
1,300.0	1,286.3	1,304.8	1,301.1	3.6	2.6	-169.05	-38.1	-40.6	104.7	100.2	4.54	23.037		
1,400.0	1,384.2	1,404.6	1,399.7	4.0	2.9	-168.25	-46.1	-53.3	110.6	105.6	4.94	22.383		
1,500.0	1,482.2	1,504.4	1,498.4	4.4	3.2	-167.52	-54.2	-66.1	116.5	111.1	5.34	21.805		
1,600.0	1,580.1	1,604.3	1,597.1	4.8	3.5	-166.87	-62.3	-78.8	122.4	116.6	5.75	21.290		
1,700.0	1,678.0	1,704.1	1,695.8	5.2	3.8	-166.28	-70.3	-91.5	128.3	122.1	6.16	20.829		
1,800.0	1,775.9	1,803.9	1,794.4	5.6	4.1	-165.74	-78.4	-104.3	134.2	127.7	6.58	20.415		
1,900.0	1,873.9	1,903.7	1,893.1	6.0	4.4	-165.24	-86.5	-117.0	140.2	133.2	7.00	20.039		
2,000.0	1,971.8	2,003.5	1,991.8	6.4	4.7	-164.79	-94.5	-129.8	146.1	138.7	7.42	19.698		
2,100.0	2,069.7	2,103.3	2,090.4	6.8	5.0	-164.37	-102.6	-142.5	152.1	144.3	7.85	19.387		
2,200.0	2,167.6	2,203.2	2,189.1	7.2	5.3	-163.98	-110.6	-155.3	158.1	149.8	8.28	19.102		
2,300.0	2,265.6	2,303.0	2,287.8	7.6	5.7	-163.63	-118.7	-168.0	164.1	155.4	8.71	18.841		
2,400.0	2,363.5	2,402.8	2,386.5	8.0	6.0	-163.29	-126.8	-180.7	170.1	160.9	9.14	18.600		
2,500.0	2,461.4	2,502.6	2,485.1	8.4	6.3	-162.98	-134.8	-193.5	176.0	166.5	9.58	18.377		
2,600.0	2,559.3	2,602.4	2,583.8	8.8	6.6	-162.69	-142.9	-206.2	182.0	172.0	10.02	18.171		
2,700.0	2,657.3	2,702.2	2,682.5	9.2	6.9	-162.42	-150.9	-219.0	188.0	177.6	10.46	17.979		
2,800.0	2,755.2	2,802.1	2,781.1	9.6	7.2	-162.16	-159.0	-231.7	194.0	183.1	10.90	17.800		
2,900.0	2,853.1	2,901.9	2,879.8	10.0	7.5	-161.92	-167.1	-244.4	200.1	188.7	11.35	17.633		
3,000.0	2,951.0	3,001.7	2,978.5	10.4	7.8	-161.70	-175.1	-257.2	206.1	194.3	11.79	17.478		
3,100.0	3,049.0	3,101.5	3,077.1	10.8	8.2	-161.49	-183.2	-269.9	212.1	199.8	12.24	17.331		
3,200.0	3,146.9	3,201.3	3,175.8	11.2	8.5	-161.29	-191.3	-282.7	218.1	205.4	12.68	17.194		
3,300.0	3,244.8	3,301.1	3,274.5	11.6	8.8	-161.09	-199.3	-295.4	224.1	211.0	13.13	17.065		
3,400.0	3,342.8	3,401.0	3,373.2	12.0	9.1	-160.91	-207.4	-308.1	230.1	216.6	13.58	16.944		
3,500.0	3,440.7	3,500.8	3,471.8	12.4	9.4	-160.74	-215.4	-320.9	236.2	222.1	14.03	16.829		
3,600.0	3,538.6	3,600.6	3,570.5	12.8	9.7	-160.58	-223.5	-333.6	242.2	227.7	14.48	16.720		
3,700.0	3,636.5	3,700.4	3,669.2	13.2	10.0	-160.43	-231.6	-346.4	248.2	233.3	14.94	16.618		
3,800.0	3,734.5	3,800.2	3,767.8	13.6	10.4	-160.28	-239.6	-359.1	254.2	238.9	15.39	16.521		
3,900.0	3,832.4	3,900.0	3,866.5	14.0	10.7	-160.14	-247.7	-371.9	260.3	244.4	15.84	16.428		
4,000.0	3,930.3	3,999.8	3,965.2	14.4	11.0	-160.00	-255.8	-384.6	266.3	250.0	16.30	16.340		
4,100.0	4,028.2	4,099.7	4,063.9	14.8	11.3	-159.88	-263.8	-397.3	272.3	255.6	16.75	16.257		
4,200.0	4,126.2	4,199.5	4,162.5	15.2	11.6	-159.75	-271.9	-410.1	278.4	261.2	17.21	16.177		
4,300.0	4,224.1	4,299.3	4,261.2	15.6	11.9	-159.64	-279.9	-422.8	284.4	266.8	17.66	16.102		
4,400.0	4,322.0	4,399.1	4,359.9	16.0	12.3	-159.52	-288.0	-435.6	290.5	272.3	18.12	16.029		
4,500.0	4,419.9	4,498.9	4,458.5	16.4	12.6	-159.41	-296.1	-448.3	296.5	277.9	18.58	15.960		
4,600.0	4,517.9	4,598.7	4,557.2	16.8	12.9	-159.31	-304.1	-461.0	302.5	283.5	19.03	15.894		
4,700.0	4,615.8	4,698.6	4,655.9	17.2	13.2	-159.21	-312.2	-473.8	308.6	289.1	19.49	15.831		
4,800.0	4,713.7	4,798.4	4,754.6	17.6	13.5	-159.12	-320.3	-486.5	314.6	294.7	19.95	15.770		
4,900.0	4,811.7	4,898.2	4,853.2	18.0	13.8	-159.02	-328.3	-499.3	320.7	300.3	20.41	15.712		
5,000.0	4,909.6	4,998.0	4,951.9	18.4	14.2	-158.93	-336.4	-512.0	326.7	305.8	20.87	15.656		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3C-9H-N267 - Hz - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
5,100.0	5,007.5	5,097.8	5,050.6	18.8	14.5	-158.85	-344.4	-524.7	332.7	311.4	21.33	15.602		
5,200.0	5,105.4	5,197.6	5,149.2	19.2	14.8	-158.77	-352.5	-537.5	338.8	317.0	21.79	15.550		
5,300.0	5,203.4	5,297.5	5,247.9	19.6	15.1	-158.69	-360.6	-550.2	344.8	322.6	22.25	15.501		
5,400.0	5,301.3	5,397.3	5,346.6	20.0	15.4	-158.61	-368.6	-563.0	350.9	328.2	22.71	15.453		
5,500.0	5,399.2	5,497.1	5,445.2	20.4	15.7	-158.54	-376.7	-575.7	356.9	333.8	23.17	15.407		
5,600.0	5,497.1	5,596.9	5,543.9	20.8	16.1	-158.46	-384.7	-588.4	363.0	339.4	23.63	15.363		
5,700.0	5,595.1	5,696.7	5,642.6	21.2	16.4	-158.39	-392.8	-601.2	369.0	344.9	24.09	15.320		
5,800.0	5,693.0	5,796.5	5,741.3	21.6	16.7	-158.33	-400.9	-613.9	375.1	350.5	24.55	15.278		
5,900.0	5,790.9	5,896.4	5,839.9	22.0	17.0	-158.26	-408.9	-626.7	381.1	356.1	25.01	15.239		
6,000.0	5,888.8	5,996.2	5,938.6	22.4	17.3	-158.20	-417.0	-639.4	387.2	361.7	25.47	15.200		
6,100.0	5,986.8	6,096.0	6,037.3	22.8	17.6	-158.14	-425.1	-652.2	393.2	367.3	25.93	15.163		
6,200.0	6,084.7	6,195.8	6,135.9	23.2	18.0	-158.08	-433.1	-664.9	399.3	372.9	26.40	15.127		
6,300.0	6,182.6	6,295.6	6,234.6	23.6	18.3	-158.02	-441.2	-677.6	405.3	378.5	26.86	15.092		
6,400.0	6,280.5	6,395.4	6,333.3	24.0	18.6	-157.96	-449.2	-690.4	411.4	384.1	27.32	15.058		
6,500.0	6,378.5	6,495.2	6,432.0	24.4	18.9	-157.91	-457.3	-703.1	417.4	389.6	27.78	15.025		
6,600.0	6,476.4	6,595.1	6,530.6	24.8	19.2	-157.86	-465.4	-715.9	423.5	395.2	28.24	14.993		
6,700.0	6,574.3	6,694.9	6,629.3	25.2	19.5	-157.81	-473.4	-728.6	429.5	400.8	28.71	14.963		
6,800.0	6,672.3	6,794.7	6,728.0	25.6	19.8	-157.90	-480.4	-741.4	435.6	406.5	29.09	14.972		
6,900.0	6,770.3	6,893.2	6,825.3	25.9	20.0	164.91	-473.8	-753.9	441.8	413.1	28.69	15.398		
7,000.0	6,867.6	6,989.8	6,918.4	26.2	20.1	127.76	-451.1	-765.9	448.1	420.1	28.00	16.003		
7,100.0	6,961.0	7,085.0	7,005.1	26.3	20.0	111.29	-413.7	-777.1	454.4	427.1	27.30	16.648		
7,200.0	7,047.9	7,178.8	7,083.3	26.4	19.9	102.83	-363.1	-787.2	460.4	433.7	26.69	17.251		
7,300.0	7,125.6	7,271.5	7,151.6	26.4	19.8	97.73	-301.2	-796.0	465.9	439.6	26.26	17.741		
7,400.0	7,191.6	7,363.3	7,208.6	26.4	19.7	94.39	-229.7	-803.4	470.6	444.6	26.05	18.068		
7,500.0	7,244.1	7,454.5	7,253.3	26.5	19.7	92.18	-150.6	-809.2	474.4	448.3	26.05	18.212		
7,600.0	7,281.4	7,545.1	7,284.9	26.5	19.7	90.80	-65.8	-813.3	477.0	450.8	26.26	18.166		
7,700.0	7,302.4	7,635.5	7,302.8	26.6	19.8	90.11	22.7	-815.6	478.5	451.8	26.67	17.941		
7,800.0	7,307.0	7,728.0	7,307.0	26.8	20.1	90.00	115.0	-816.1	478.8	451.4	27.34	17.510		
7,900.0	7,307.0	7,828.0	7,307.0	27.1	20.5	90.00	215.0	-816.1	478.8	450.3	28.50	16.797		
8,000.0	7,307.0	7,928.0	7,307.0	27.5	21.0	90.00	315.0	-816.1	478.8	448.7	30.03	15.945		
8,100.0	7,307.0	8,028.0	7,307.0	28.0	21.7	90.00	415.0	-816.1	478.8	446.9	31.86	15.025		
8,200.0	7,307.0	8,128.0	7,307.0	28.6	22.4	90.00	515.0	-816.1	478.8	444.8	33.97	14.095		
8,300.0	7,307.0	8,228.0	7,307.0	29.3	23.3	90.00	615.0	-816.1	478.8	442.5	36.29	13.194		
8,400.0	7,307.0	8,328.0	7,307.0	30.1	24.3	90.00	715.0	-816.1	478.8	440.0	38.79	12.344		
8,500.0	7,307.0	8,428.0	7,307.0	30.9	25.4	90.00	815.0	-816.1	478.8	437.3	41.43	11.555		
8,600.0	7,307.0	8,528.0	7,307.0	31.9	26.5	90.00	915.0	-816.1	478.8	434.6	44.20	10.832		
8,700.0	7,307.0	8,628.0	7,307.0	32.9	27.7	90.00	1,015.0	-816.1	478.8	431.7	47.06	10.173		
8,800.0	7,307.0	8,728.0	7,307.0	33.9	29.0	90.00	1,115.0	-816.1	478.8	428.7	50.01	9.573		
8,900.0	7,307.0	8,828.0	7,307.0	35.0	30.3	90.00	1,215.0	-816.1	478.8	425.7	53.03	9.029		
9,000.0	7,307.0	8,928.0	7,307.0	36.2	31.6	90.00	1,315.0	-816.1	478.8	422.7	56.10	8.534		
9,100.0	7,307.0	9,028.0	7,307.0	37.4	33.0	90.00	1,415.0	-816.1	478.8	419.5	59.22	8.084		
9,200.0	7,307.0	9,128.0	7,307.0	38.7	34.5	90.00	1,515.0	-816.1	478.8	416.4	62.38	7.674		
9,300.0	7,307.0	9,228.0	7,307.0	40.0	35.9	90.00	1,615.0	-816.1	478.8	413.2	65.58	7.300		
9,400.0	7,307.0	9,328.0	7,307.0	41.3	37.4	90.00	1,715.0	-816.1	478.8	409.9	68.81	6.958		
9,500.0	7,307.0	9,428.0	7,307.0	42.7	38.9	90.00	1,815.0	-816.1	478.8	406.7	72.06	6.643		
9,600.0	7,307.0	9,528.0	7,307.0	44.1	40.4	90.00	1,915.0	-816.1	478.8	403.4	75.34	6.354		
9,700.0	7,307.0	9,628.0	7,307.0	45.5	42.0	90.00	2,015.0	-816.1	478.8	400.1	78.64	6.088		
9,800.0	7,307.0	9,728.0	7,307.0	46.9	43.5	90.00	2,115.0	-816.1	478.8	396.8	81.95	5.842		
9,900.0	7,307.0	9,828.0	7,307.0	48.4	45.1	90.00	2,215.0	-816.1	478.8	393.5	85.28	5.614		
10,000.0	7,307.0	9,928.0	7,307.0	49.8	46.7	90.00	2,315.0	-816.1	478.8	390.1	88.63	5.402		
10,100.0	7,307.0	10,028.0	7,307.0	51.3	48.3	90.00	2,415.0	-816.1	478.8	386.8	91.98	5.205		
10,200.0	7,307.0	10,128.0	7,307.0	52.9	49.9	90.00	2,515.0	-816.1	478.8	383.4	95.35	5.021		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3C-9H-N267 - 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							
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	7,307.0	10,228.0	7,307.0	54.4	51.5	90.00	2,615.0	-816.1	478.8	380.0	98.73	4.849	
10,400.0	7,307.0	10,328.0	7,307.0	55.9	53.1	90.00	2,715.0	-816.1	478.8	376.6	102.11	4.689	
10,500.0	7,307.0	10,428.0	7,307.0	57.5	54.7	90.00	2,815.0	-816.1	478.8	373.2	105.51	4.538	
10,600.0	7,307.0	10,528.0	7,307.0	59.0	56.4	90.00	2,915.0	-816.1	478.8	369.8	108.91	4.396	
10,700.0	7,307.0	10,628.0	7,307.0	60.6	58.0	90.00	3,015.0	-816.1	478.8	366.4	112.31	4.263	
10,800.0	7,307.0	10,728.0	7,307.0	62.2	59.7	90.00	3,115.0	-816.1	478.8	363.0	115.73	4.137	
10,900.0	7,307.0	10,828.0	7,307.0	63.8	61.3	90.00	3,215.0	-816.1	478.8	359.6	119.15	4.018	
11,000.0	7,307.0	10,928.0	7,307.0	65.4	63.0	90.00	3,315.0	-816.1	478.8	356.2	122.57	3.906	
11,100.0	7,307.0	11,028.0	7,307.0	67.0	64.7	90.00	3,415.0	-816.1	478.8	352.8	126.00	3.800	
11,200.0	7,307.0	11,128.0	7,307.0	68.6	66.3	90.00	3,515.0	-816.1	478.8	349.3	129.43	3.699	
11,300.0	7,307.0	11,228.0	7,307.0	70.2	68.0	90.00	3,615.0	-816.1	478.8	345.9	132.87	3.603	
11,400.0	7,307.0	11,328.0	7,307.0	71.9	69.7	90.00	3,715.0	-816.1	478.8	342.4	136.31	3.512	
11,500.0	7,307.0	11,428.0	7,307.0	73.5	71.4	90.00	3,815.0	-816.1	478.8	339.0	139.75	3.426	
11,600.0	7,307.0	11,528.0	7,307.0	75.1	73.1	90.00	3,915.0	-816.1	478.8	335.6	143.20	3.343	
11,700.0	7,307.0	11,628.0	7,307.0	76.8	74.8	90.00	4,015.0	-816.1	478.8	332.1	146.65	3.265	
11,800.0	7,307.0	11,728.0	7,307.0	78.4	76.5	90.00	4,115.0	-816.1	478.8	328.6	150.10	3.189	
11,900.0	7,307.0	11,828.0	7,307.0	80.1	78.2	90.00	4,215.0	-816.1	478.8	325.2	153.56	3.118	
12,000.0	7,307.0	11,928.0	7,307.0	81.7	79.9	90.00	4,315.0	-816.1	478.8	321.7	157.01	3.049	
12,100.0	7,307.0	12,028.0	7,307.0	83.4	81.6	90.00	4,415.0	-816.1	478.8	318.3	160.47	2.983	
12,200.0	7,307.0	12,128.0	7,307.0	85.1	83.3	90.00	4,515.0	-816.1	478.8	314.8	163.94	2.920	
12,300.0	7,307.0	12,228.0	7,307.0	86.7	85.0	90.00	4,615.0	-816.1	478.8	311.4	167.40	2.860	
12,400.0	7,307.0	12,328.0	7,307.0	88.4	86.7	90.00	4,715.0	-816.1	478.8	307.9	170.87	2.802	
12,500.0	7,307.0	12,428.0	7,307.0	90.1	88.4	90.00	4,815.0	-816.1	478.8	304.4	174.33	2.746	
12,600.0	7,307.0	12,528.0	7,307.0	91.8	90.1	90.00	4,915.0	-816.1	478.8	300.9	177.80	2.693	
12,700.0	7,307.0	12,628.0	7,307.0	93.5	91.8	90.00	5,015.0	-816.1	478.8	297.5	181.27	2.641	
12,800.0	7,307.0	12,728.0	7,307.0	95.1	93.5	90.00	5,115.0	-816.1	478.8	294.0	184.74	2.591	
12,900.0	7,307.0	12,828.0	7,307.0	96.8	95.2	90.00	5,215.0	-816.1	478.8	290.5	188.22	2.544	
12,912.2	7,307.0	12,840.2	7,307.0	97.0	95.4	90.00	5,227.1	-816.1	478.8	290.1	188.64	2.538	
12,923.4	7,307.0	12,840.5	7,307.0	97.2	95.4	90.00	5,227.5	-816.1	478.9	290.0	188.84	2.536 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3D-9H-N267 - 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							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	30.8	30.8					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	30.8	30.8	30.5	0.24	125.848		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	30.8	30.8	30.2	0.59	51.820 CC		
227.9	227.9	227.9	227.9	0.3	0.3	-157.73	0.0	30.8	30.8	30.1	0.69	44.616 ES		
300.0	300.0	300.0	300.0	0.5	0.5	-157.98	0.0	30.8	31.2	30.2	0.94	33.058		
400.0	399.9	399.9	399.9	0.7	0.6	-160.14	0.0	30.8	34.4	33.1	1.29	26.646		
500.0	499.7	499.7	499.7	0.9	0.8	-163.41	0.0	30.8	41.0	39.4	1.64	25.021		
600.0	599.1	600.0	599.9	1.1	1.0	-166.38	-0.5	30.0	50.3	48.4	1.99	25.311		
700.0	698.2	700.2	700.2	1.4	1.2	-168.52	-1.8	27.7	61.5	59.2	2.34	26.323		
800.0	796.6	800.5	800.3	1.7	1.4	-170.05	-4.0	23.9	74.5	71.8	2.68	27.765		
900.0	894.6	900.9	900.5	2.1	1.6	-171.10	-7.0	18.6	88.5	85.5	3.03	29.174		
1,000.0	992.5	1,001.7	1,001.0	2.5	1.8	-171.62	-11.0	11.7	101.1	97.7	3.39	29.809		
1,100.0	1,090.4	1,102.9	1,101.8	2.9	2.0	-171.77	-15.9	3.3	112.0	108.2	3.75	29.847		
1,200.0	1,188.4	1,204.4	1,202.7	3.2	2.2	-171.67	-21.6	-6.7	121.2	117.1	4.12	29.434		
1,300.0	1,286.3	1,306.2	1,303.5	3.6	2.5	-171.36	-28.3	-18.3	128.7	124.2	4.49	28.674		
1,400.0	1,384.2	1,405.9	1,402.3	4.0	2.8	-170.99	-35.3	-30.3	135.5	130.6	4.86	27.877		
1,500.0	1,482.2	1,505.7	1,501.1	4.4	3.0	-170.66	-42.2	-42.3	142.2	137.0	5.23	27.182		
1,600.0	1,580.1	1,605.5	1,599.9	4.8	3.3	-170.36	-49.2	-54.4	149.0	143.4	5.61	26.570		
1,700.0	1,678.0	1,705.2	1,698.7	5.2	3.6	-170.09	-56.1	-66.4	155.8	149.8	5.99	26.028		
1,800.0	1,775.9	1,805.0	1,797.5	5.6	3.9	-169.83	-63.0	-78.4	162.6	156.2	6.36	25.544		
1,900.0	1,873.9	1,904.8	1,896.3	6.0	4.2	-169.60	-70.0	-90.4	169.4	162.6	6.74	25.109		
2,000.0	1,971.8	2,004.5	1,995.1	6.4	4.5	-169.39	-76.9	-102.5	176.1	169.0	7.13	24.716		
2,100.0	2,069.7	2,104.3	2,093.9	6.8	4.7	-169.19	-83.9	-114.5	182.9	175.4	7.51	24.359		
2,200.0	2,167.6	2,204.1	2,192.7	7.2	5.0	-169.01	-90.8	-126.5	189.7	181.8	7.89	24.034		
2,300.0	2,265.6	2,303.8	2,291.5	7.6	5.3	-168.84	-97.8	-138.5	196.5	188.2	8.28	23.736		
2,400.0	2,363.5	2,403.6	2,390.3	8.0	5.6	-168.68	-104.7	-150.6	203.3	194.6	8.67	23.462		
2,500.0	2,461.4	2,503.4	2,489.0	8.4	5.9	-168.53	-111.6	-162.6	210.1	201.1	9.05	23.210		
2,600.0	2,559.3	2,603.1	2,587.8	8.8	6.2	-168.39	-118.6	-174.6	216.9	207.5	9.44	22.977		
2,700.0	2,657.3	2,702.9	2,686.6	9.2	6.5	-168.26	-125.5	-186.6	223.7	213.9	9.83	22.760		
2,800.0	2,755.2	2,802.7	2,785.4	9.6	6.8	-168.13	-132.5	-198.7	230.5	220.3	10.22	22.559		
2,900.0	2,853.1	2,902.4	2,884.2	10.0	7.1	-168.02	-139.4	-210.7	237.3	226.7	10.61	22.371		
3,000.0	2,951.0	3,002.2	2,983.0	10.4	7.4	-167.91	-146.4	-222.7	244.1	233.1	11.00	22.195		
3,100.0	3,049.0	3,102.0	3,081.8	10.8	7.7	-167.80	-153.3	-234.7	250.9	239.5	11.39	22.031		
3,200.0	3,146.9	3,201.7	3,180.6	11.2	8.0	-167.70	-160.2	-246.7	257.7	245.9	11.78	21.876		
3,300.0	3,244.8	3,301.5	3,279.4	11.6	8.3	-167.61	-167.2	-258.8	264.5	252.4	12.17	21.731		
3,400.0	3,342.8	3,401.3	3,378.2	12.0	8.6	-167.52	-174.1	-270.8	271.3	258.8	12.57	21.594		
3,500.0	3,440.7	3,501.0	3,477.0	12.4	8.9	-167.44	-181.1	-282.8	278.1	265.2	12.96	21.465		
3,600.0	3,538.6	3,600.8	3,575.8	12.8	9.2	-167.36	-188.0	-294.8	284.9	271.6	13.35	21.343		
3,700.0	3,636.5	3,700.6	3,674.6	13.2	9.5	-167.28	-195.0	-306.9	291.8	278.0	13.74	21.227		
3,800.0	3,734.5	3,800.3	3,773.4	13.6	9.8	-167.21	-201.9	-318.9	298.6	284.4	14.14	21.118		
3,900.0	3,832.4	3,900.1	3,872.2	14.0	10.1	-167.14	-208.8	-330.9	305.4	290.8	14.53	21.014		
4,000.0	3,930.3	3,999.9	3,971.0	14.4	10.4	-167.07	-215.8	-342.9	312.2	297.3	14.93	20.915		
4,100.0	4,028.2	4,099.6	4,069.8	14.8	10.7	-167.01	-222.7	-355.0	319.0	303.7	15.32	20.820		
4,200.0	4,126.2	4,199.4	4,168.6	15.2	11.0	-166.94	-229.7	-367.0	325.8	310.1	15.72	20.731		
4,300.0	4,224.1	4,299.2	4,267.4	15.6	11.3	-166.89	-236.6	-379.0	332.6	316.5	16.11	20.645		
4,400.0	4,322.0	4,398.9	4,366.2	16.0	11.6	-166.83	-243.5	-391.0	339.4	322.9	16.51	20.563		
4,500.0	4,419.9	4,498.7	4,465.0	16.4	11.9	-166.77	-250.5	-403.1	346.2	329.3	16.90	20.485		
4,600.0	4,517.9	4,598.5	4,563.8	16.8	12.2	-166.72	-257.4	-415.1	353.0	335.7	17.30	20.410		
4,700.0	4,615.8	4,698.2	4,662.6	17.2	12.4	-166.67	-264.4	-427.1	359.8	342.2	17.69	20.339		
4,800.0	4,713.7	4,798.0	4,761.4	17.6	12.7	-166.62	-271.3	-439.1	366.7	348.6	18.09	20.270		
4,900.0	4,811.7	4,897.8	4,860.2	18.0	13.0	-166.58	-278.3	-451.2	373.5	355.0	18.49	20.204		
5,000.0	4,909.6	4,997.5	4,959.0	18.4	13.3	-166.53	-285.2	-463.2	380.3	361.4	18.88	20.141		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design													S9-T2N-R67W (Sprague) - Sprague 3D-9H-N267 - 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							Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor					
5,100.0	5,007.5	5,097.3	5,057.8	18.8	13.6	-166.49	-292.1	-475.2	387.1	367.8	19.28	20.080					
5,200.0	5,105.4	5,197.1	5,156.6	19.2	13.9	-166.45	-299.1	-487.2	393.9	374.2	19.67	20.021					
5,300.0	5,203.4	5,296.8	5,255.3	19.6	14.2	-166.41	-306.0	-499.3	400.7	380.7	20.07	19.965					
5,400.0	5,301.3	5,396.6	5,354.1	20.0	14.5	-166.37	-313.0	-511.3	407.5	387.1	20.47	19.910					
5,500.0	5,399.2	5,496.4	5,452.9	20.4	14.8	-166.33	-319.9	-523.3	414.3	393.5	20.87	19.858					
5,600.0	5,497.1	5,596.1	5,551.7	20.8	15.1	-166.29	-326.9	-535.3	421.2	399.9	21.26	19.808					
5,700.0	5,595.1	5,695.9	5,650.5	21.2	15.4	-166.26	-333.8	-547.4	428.0	406.3	21.66	19.759					
5,800.0	5,693.0	5,795.7	5,749.3	21.6	15.7	-166.22	-340.7	-559.4	434.8	412.7	22.06	19.712 SF					
5,900.0	5,790.9	5,889.0	5,841.9	22.0	16.0	-166.23	-346.9	-570.1	442.3	419.9	22.43	19.718					
6,000.0	5,888.8	5,981.9	5,934.1	22.4	16.2	-166.30	-352.3	-579.4	451.3	428.5	22.78	19.808					
6,100.0	5,986.8	6,074.5	6,026.2	22.8	16.4	-166.43	-356.9	-587.3	461.8	438.7	23.12	19.977					
6,200.0	6,084.7	6,166.7	6,118.1	23.2	16.6	-166.63	-360.7	-594.0	473.8	450.4	23.43	20.220					
6,300.0	6,182.6	6,258.6	6,209.8	23.6	16.8	-166.88	-363.8	-599.4	487.3	463.6	23.73	20.535					

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3E-9H-N267 - 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						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	39.1	39.1				
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	39.1	39.1	38.9	0.24	160.170	
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	39.1	39.1	38.5	0.59	65.953 CC	
260.4	260.4	260.6	260.6	0.4	0.4	-157.42	-0.3	39.0	39.3	38.5	0.81	48.824	
300.0	300.0	300.3	300.2	0.5	0.5	-156.73	-0.8	38.8	39.2	38.3	0.94	41.550 ES	
400.0	399.9	400.5	400.4	0.7	0.7	-155.24	-3.3	37.8	41.5	40.2	1.30	31.931	
500.0	499.7	500.6	500.5	0.9	0.8	-153.73	-7.3	36.1	46.3	44.7	1.67	27.822	
600.0	599.1	600.6	600.2	1.1	1.0	-152.41	-13.0	33.8	53.8	51.7	2.05	26.229	
700.0	698.2	700.4	699.7	1.4	1.3	-151.37	-20.2	30.8	63.8	61.4	2.46	25.923	
800.0	796.6	799.9	798.8	1.7	1.5	-150.60	-29.0	27.2	76.5	73.5	2.91	26.302	
900.0	894.6	899.2	897.5	2.1	1.7	-149.89	-39.4	22.9	91.0	87.6	3.39	26.858	
1,000.0	992.5	998.6	996.0	2.5	2.0	-148.56	-51.4	17.9	105.3	101.4	3.91	26.913	
1,100.0	1,090.4	1,098.0	1,094.3	2.9	2.3	-146.73	-64.9	12.4	119.2	114.8	4.48	26.601	
1,200.0	1,188.4	1,197.3	1,192.3	3.2	2.6	-144.55	-80.1	6.1	133.0	127.9	5.10	26.058	
1,300.0	1,286.3	1,296.4	1,289.8	3.6	3.0	-142.19	-96.5	-0.7	146.7	140.9	5.76	25.447	
1,400.0	1,384.2	1,395.3	1,387.0	4.0	3.3	-140.15	-113.2	-7.6	160.6	154.1	6.44	24.934	
1,500.0	1,482.2	1,494.2	1,484.2	4.4	3.7	-138.44	-129.9	-14.4	174.6	167.5	7.12	24.514	
1,600.0	1,580.1	1,593.0	1,581.4	4.8	4.0	-136.98	-146.5	-21.3	188.8	181.0	7.81	24.166	
1,700.0	1,678.0	1,691.9	1,678.7	5.2	4.3	-135.73	-163.2	-28.2	203.1	194.6	8.51	23.876	
1,800.0	1,775.9	1,790.8	1,775.9	5.6	4.7	-134.64	-179.8	-35.0	217.5	208.3	9.20	23.631	
1,900.0	1,873.9	1,889.7	1,873.1	6.0	5.1	-133.69	-196.5	-41.9	231.9	222.0	9.90	23.423	
2,000.0	1,971.8	1,988.6	1,970.3	6.4	5.4	-132.85	-213.1	-48.8	246.4	235.8	10.60	23.243	
2,100.0	2,069.7	2,087.5	2,067.6	6.8	5.8	-132.10	-229.8	-55.7	260.9	249.6	11.30	23.088	
2,200.0	2,167.6	2,186.3	2,164.8	7.2	6.1	-131.43	-246.5	-62.5	275.5	263.5	12.00	22.952	
2,300.0	2,265.6	2,285.2	2,262.0	7.6	6.5	-130.83	-263.1	-69.4	290.1	277.4	12.71	22.833	
2,400.0	2,363.5	2,384.1	2,359.3	8.0	6.8	-130.28	-279.8	-76.3	304.8	291.4	13.41	22.727	
2,500.0	2,461.4	2,483.0	2,456.5	8.4	7.2	-129.79	-296.4	-83.2	319.4	305.3	14.11	22.633	
2,600.0	2,559.3	2,581.9	2,553.7	8.8	7.5	-129.34	-313.1	-90.0	334.1	319.3	14.82	22.549	
2,700.0	2,657.3	2,680.8	2,650.9	9.2	7.9	-128.93	-329.8	-96.9	348.8	333.3	15.52	22.474	
2,800.0	2,755.2	2,779.6	2,748.2	9.6	8.2	-128.55	-346.4	-103.8	363.6	347.3	16.23	22.405	
2,900.0	2,853.1	2,878.5	2,845.4	10.0	8.6	-128.20	-363.1	-110.6	378.3	361.4	16.93	22.343	
3,000.0	2,951.0	2,977.4	2,942.6	10.4	9.0	-127.87	-379.7	-117.5	393.0	375.4	17.64	22.287	
3,100.0	3,049.0	3,076.3	3,039.8	10.8	9.3	-127.57	-396.4	-124.4	407.8	389.5	18.34	22.235	
3,200.0	3,146.9	3,175.9	3,137.9	11.2	9.7	-127.36	-412.7	-131.1	422.5	403.5	19.02	22.208 SF	
3,300.0	3,244.8	3,275.8	3,236.5	11.6	10.0	-127.38	-427.5	-137.2	437.0	417.3	19.67	22.217	
3,400.0	3,342.8	3,375.7	3,335.3	12.0	10.3	-127.63	-440.8	-142.7	451.3	431.0	20.27	22.259	
3,500.0	3,440.7	3,475.6	3,434.4	12.4	10.5	-128.07	-452.4	-147.5	465.4	444.5	20.84	22.334	
3,600.0	3,538.6	3,575.4	3,533.6	12.8	10.8	-128.70	-462.5	-151.6	479.3	457.9	21.36	22.444	
3,700.0	3,636.5	3,675.0	3,632.8	13.2	11.0	-129.49	-470.9	-155.1	493.1	471.3	21.83	22.590	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3F-9H-N267 - 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							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	50.3	50.3					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	50.3	50.3	50.1	0.24	205.933		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	50.3	50.3	49.7	0.59	84.796 CC		
227.8	227.8	227.8	227.8	0.3	0.3	-157.71	0.0	50.3	50.4	49.7	0.69	72.960 ES		
300.0	300.0	300.0	300.0	0.5	0.5	-157.86	0.0	50.3	50.7	49.8	0.94	53.821		
400.0	399.9	399.9	399.9	0.7	0.6	-159.24	0.0	50.3	54.0	52.7	1.29	41.785		
500.0	499.7	499.7	499.7	0.9	0.8	-161.53	0.0	50.3	60.5	58.9	1.64	36.890		
600.0	599.1	599.0	599.0	1.1	1.0	-163.47	-0.9	50.5	70.6	68.6	1.99	35.462 SF		
700.0	698.2	698.0	698.0	1.4	1.2	-164.33	-3.4	50.9	84.1	81.8	2.34	35.906		
800.0	796.6	796.5	796.4	1.7	1.3	-164.47	-7.6	51.7	101.1	98.4	2.70	37.403		
900.0	894.6	894.4	894.1	2.1	1.5	-164.13	-13.4	52.7	120.8	117.7	3.08	39.199		
1,000.0	992.5	992.3	991.6	2.5	1.7	-163.24	-20.9	54.0	140.7	137.3	3.48	40.430		
1,100.0	1,090.4	1,089.9	1,088.9	2.9	2.0	-161.97	-29.9	55.6	160.9	157.0	3.91	41.194		
1,200.0	1,188.4	1,187.4	1,185.8	3.2	2.2	-160.45	-40.6	57.5	181.3	176.9	4.36	41.594		
1,300.0	1,286.3	1,284.7	1,282.2	3.6	2.4	-158.77	-52.9	59.6	202.0	197.2	4.84	41.738		
1,400.0	1,384.2	1,382.3	1,378.9	4.0	2.7	-157.20	-65.9	61.9	223.0	217.7	5.34	41.757		
1,500.0	1,482.2	1,479.9	1,475.6	4.4	2.9	-155.90	-79.0	64.2	244.1	238.3	5.85	41.734		
1,600.0	1,580.1	1,577.5	1,572.3	4.8	3.2	-154.81	-92.0	66.5	265.4	259.0	6.37	41.687		
1,700.0	1,678.0	1,675.1	1,669.0	5.2	3.5	-153.88	-105.1	68.8	286.7	279.8	6.89	41.627		
1,800.0	1,775.9	1,772.7	1,765.7	5.6	3.8	-153.08	-118.1	71.1	308.0	300.6	7.41	41.561		
1,900.0	1,873.9	1,870.3	1,862.4	6.0	4.0	-152.38	-131.1	73.4	329.5	321.5	7.94	41.494		
2,000.0	1,971.8	1,967.9	1,959.1	6.4	4.3	-151.77	-144.2	75.7	350.9	342.5	8.47	41.428		
2,100.0	2,069.7	2,065.5	2,055.8	6.8	4.6	-151.22	-157.2	78.0	372.4	363.4	9.00	41.365		
2,200.0	2,167.6	2,163.1	2,152.5	7.2	4.9	-150.74	-170.3	80.3	394.0	384.4	9.54	41.304		
2,300.0	2,265.6	2,260.7	2,249.2	7.6	5.1	-150.31	-183.3	82.6	415.5	405.4	10.07	41.247		
2,400.0	2,363.5	2,358.3	2,345.9	8.0	5.4	-149.92	-196.4	84.9	437.1	426.5	10.61	41.193		
2,500.0	2,461.4	2,455.9	2,442.6	8.4	5.7	-149.57	-209.4	87.2	458.7	447.5	11.15	41.142		
2,600.0	2,559.3	2,553.5	2,539.3	8.8	6.0	-149.24	-222.5	89.5	480.3	468.6	11.69	41.094		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3G-9H-N267 - 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		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	61.5	61.5					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	61.5	61.5	61.3	0.24	251.696		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	61.5	61.5	60.9	0.59	103.640 CC		
227.8	227.8	227.8	227.8	0.3	0.3	-157.70	0.0	61.5	61.6	60.9	0.69	89.156 ES		
300.0	300.0	300.0	300.0	0.5	0.5	-157.83	0.0	61.5	61.9	61.0	0.94	65.686		
400.0	399.9	399.9	399.9	0.7	0.6	-158.97	0.0	61.5	65.2	63.9	1.29	50.438		
500.0	499.7	498.8	498.8	0.9	0.8	-160.41	-0.6	62.1	72.3	70.7	1.64	44.065		
600.0	599.1	597.2	597.2	1.1	1.0	-161.43	-2.4	63.9	83.9	81.9	1.99	42.136 SF		
700.0	698.2	694.9	694.7	1.4	1.2	-162.05	-5.3	67.0	100.0	97.6	2.35	42.602		
800.0	796.6	791.5	791.2	1.7	1.4	-162.33	-9.3	71.1	120.4	117.7	2.71	44.458		
900.0	894.6	887.2	886.6	2.1	1.6	-162.41	-14.4	76.4	144.5	141.4	3.08	46.853		
1,000.0	992.5	982.2	981.2	2.5	1.8	-162.10	-20.6	82.8	169.8	166.3	3.47	48.880		
1,100.0	1,090.4	1,076.6	1,075.1	2.9	2.0	-161.52	-27.8	90.2	196.2	192.3	3.88	50.599		
1,200.0	1,188.4	1,170.4	1,168.1	3.2	2.2	-160.77	-36.0	98.7	223.6	219.3	4.29	52.074		
1,300.0	1,286.3	1,265.5	1,262.3	3.6	2.5	-159.97	-45.1	108.2	251.9	247.2	4.72	53.325		
1,400.0	1,384.2	1,361.3	1,357.2	4.0	2.8	-159.31	-54.4	117.8	280.3	275.2	5.16	54.319		
1,500.0	1,482.2	1,457.2	1,452.1	4.4	3.0	-158.77	-63.6	127.4	308.7	303.1	5.60	55.129		
1,600.0	1,580.1	1,553.0	1,547.0	4.8	3.3	-158.33	-72.9	137.0	337.2	331.1	6.04	55.801		
1,700.0	1,678.0	1,648.9	1,641.9	5.2	3.6	-157.95	-82.2	146.5	365.6	359.2	6.49	56.367		
1,800.0	1,775.9	1,744.7	1,736.8	5.6	3.9	-157.63	-91.4	156.1	394.1	387.2	6.93	56.848		
1,900.0	1,873.9	1,840.5	1,831.7	6.0	4.1	-157.35	-100.7	165.7	422.6	415.2	7.38	57.263		
2,000.0	1,971.8	1,936.4	1,926.6	6.4	4.4	-157.10	-110.0	175.3	451.1	443.3	7.83	57.623		
2,100.0	2,069.7	2,032.2	2,021.5	6.8	4.7	-156.89	-119.2	184.9	479.6	471.3	8.28	57.939		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3H-9H-N267 - 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							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	-0.1	69.9	69.9					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	-0.1	69.9	69.9	69.6	0.24	286.018		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	-0.1	69.9	69.9	69.3	0.59	117.772 CC		
227.8	227.8	227.8	227.8	0.3	0.3	-157.70	-0.1	69.9	70.0	69.3	0.69	101.304 ES		
300.0	300.0	300.0	300.0	0.5	0.5	-157.81	-0.1	69.9	70.3	69.3	0.94	74.585		
400.0	399.9	399.9	399.9	0.7	0.6	-158.81	-0.1	69.9	73.5	72.2	1.29	56.928		
500.0	499.7	497.4	497.4	0.9	0.8	-159.86	-0.9	71.3	81.5	79.8	1.64	49.719		
600.0	599.1	594.0	593.8	1.1	1.0	-160.20	-3.5	75.5	95.5	93.5	1.99	47.975 SF		
700.0	698.2	689.1	688.6	1.4	1.2	-160.03	-7.8	82.2	115.4	113.1	2.35	49.115		
800.0	796.6	782.3	781.1	1.7	1.4	-159.57	-13.6	91.5	141.2	138.5	2.72	51.862		
900.0	894.6	873.3	871.1	2.1	1.7	-159.05	-20.7	103.0	172.0	168.9	3.11	55.228		
1,000.0	992.5	966.3	962.8	2.5	2.0	-158.39	-29.2	116.6	204.8	201.3	3.52	58.121		
1,100.0	1,090.4	1,060.7	1,055.7	2.9	2.3	-157.88	-37.9	130.5	237.8	233.9	3.94	60.302		
1,200.0	1,188.4	1,155.1	1,148.7	3.2	2.6	-157.50	-46.6	144.4	270.8	266.5	4.37	62.002		
1,300.0	1,286.3	1,249.5	1,241.6	3.6	2.9	-157.20	-55.3	158.3	303.8	299.0	4.80	63.359		
1,400.0	1,384.2	1,343.9	1,334.6	4.0	3.2	-156.96	-64.0	172.2	336.8	331.6	5.23	64.464		
1,500.0	1,482.2	1,438.3	1,427.5	4.4	3.6	-156.76	-72.7	186.1	369.9	364.2	5.66	65.380		
1,600.0	1,580.1	1,532.6	1,520.5	4.8	3.9	-156.60	-81.3	200.0	402.9	396.8	6.09	66.151		
1,700.0	1,678.0	1,627.0	1,613.4	5.2	4.2	-156.46	-90.0	213.9	435.9	429.4	6.52	66.807		
1,800.0	1,775.9	1,721.4	1,706.4	5.6	4.5	-156.33	-98.7	227.8	468.9	462.0	6.96	67.372		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3I-9H-N267 - 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							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty	Separation			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	92.58	-3.6	81.1	81.2					
100.0	100.0	100.0	100.0	0.1	0.1	92.58	-3.6	81.1	81.2	80.9	0.24	332.117		
200.0	200.0	200.0	200.0	0.3	0.3	92.58	-3.6	81.1	81.2	80.6	0.59	136.754	CC	
227.8	227.8	227.8	227.8	0.3	0.3	-155.17	-3.6	81.1	81.2	80.5	0.69	117.614	ES	
300.0	300.0	300.0	300.0	0.5	0.5	-155.28	-3.6	81.1	81.5	80.6	0.94	86.528		
400.0	399.9	397.2	397.2	0.7	0.6	-155.80	-4.3	82.6	86.3	85.0	1.29	67.032		
500.0	499.7	493.7	493.6	0.9	0.8	-156.32	-6.2	87.1	97.4	95.8	1.64	59.559		
600.0	599.1	588.9	588.4	1.1	1.0	-156.74	-9.2	94.5	114.8	112.8	1.99	57.722	SF	
700.0	698.2	682.3	681.1	1.4	1.3	-157.01	-13.4	104.6	138.3	135.9	2.35	58.886		
800.0	796.6	773.3	771.2	1.7	1.5	-157.15	-18.6	117.1	167.7	165.0	2.72	61.752		
900.0	894.6	861.9	858.3	2.1	1.8	-157.28	-24.8	131.8	202.3	199.2	3.10	65.349		
1,000.0	992.5	953.5	948.0	2.5	2.2	-157.27	-31.9	148.8	239.0	235.5	3.49	68.421		
1,100.0	1,090.4	1,046.5	1,039.1	2.9	2.5	-157.26	-39.1	166.2	275.8	271.9	3.90	70.759		
1,200.0	1,188.4	1,139.5	1,130.2	3.2	2.9	-157.24	-46.3	183.5	312.5	308.2	4.30	72.603		
1,300.0	1,286.3	1,232.5	1,221.3	3.6	3.2	-157.23	-53.5	200.9	349.3	344.6	4.71	74.090		
1,400.0	1,384.2	1,325.5	1,312.3	4.0	3.6	-157.23	-60.8	218.3	386.0	380.9	5.13	75.313		
1,500.0	1,482.2	1,418.5	1,403.4	4.4	4.0	-157.22	-68.0	235.6	422.8	417.3	5.54	76.334		
1,600.0	1,580.1	1,511.5	1,494.5	4.8	4.3	-157.22	-75.2	253.0	459.6	453.6	5.95	77.199		
1,700.0	1,678.0	1,604.5	1,585.6	5.2	4.7	-157.21	-82.5	270.3	496.3	489.9	6.37	77.940		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3J-9H-N267 - 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							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	92.34	-3.7	89.5	89.5					
100.0	100.0	100.0	100.0	0.1	0.1	92.34	-3.7	89.5	89.5	89.3	0.24	366.408		
200.0	200.0	200.0	200.0	0.3	0.3	92.34	-3.7	89.5	89.5	88.9	0.59	150.874	CC, ES	
300.0	300.0	296.9	296.9	0.5	0.5	-155.53	-3.7	91.1	91.6	90.7	0.94	97.770		
400.0	399.9	393.3	393.2	0.7	0.7	-156.37	-3.7	96.0	99.9	98.6	1.28	78.000		
500.0	499.7	488.6	488.2	0.9	0.9	-157.70	-3.7	104.0	114.7	113.0	1.62	70.653		
600.0	599.1	582.2	581.1	1.1	1.1	-159.14	-3.7	114.9	136.0	134.0	1.96	69.239	SF	
700.0	698.2	673.4	671.3	1.4	1.4	-160.46	-3.7	128.5	163.6	161.3	2.30	71.106		
800.0	796.6	761.9	758.3	1.7	1.7	-161.55	-3.7	144.4	197.5	194.9	2.64	74.952		
900.0	894.6	847.3	841.8	2.1	2.1	-162.53	-3.7	162.3	236.7	233.8	2.97	79.698		
1,000.0	992.5	930.5	922.6	2.5	2.4	-163.25	-3.7	182.1	278.9	275.6	3.31	84.346		
1,100.0	1,090.4	1,012.3	1,001.5	2.9	2.9	-163.72	-3.7	203.8	323.6	319.9	3.64	88.876		
1,200.0	1,188.4	1,104.3	1,089.9	3.2	3.3	-163.83	-5.3	229.2	368.9	364.9	4.00	92.146		
1,300.0	1,286.3	1,197.0	1,179.0	3.6	3.8	-163.46	-10.0	254.2	413.6	409.2	4.39	94.301		
1,400.0	1,384.2	1,288.3	1,266.7	4.0	4.2	-162.84	-17.0	278.5	457.6	452.8	4.78	95.797		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 4-6-9 (EXISTING) - ENCANA WELL - SURVEYS														Offset Site Error:	0.0 ft
Survey Program: 136-Geolink 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	107.15	-83.8	271.4	284.6						
100.0	100.0	82.7	82.7	0.1	0.1	107.16	-83.8	271.4	284.0	283.8	0.26	1,109.198			
169.0	169.0	151.4	151.4	0.2	0.2	107.17	-83.8	271.3	284.0	283.5	0.49	579.883 CC			
200.0	200.0	181.5	181.5	0.3	0.3	107.18	-83.9	271.3	284.0	283.4	0.60	476.142 ES			
300.0	300.0	279.5	279.5	0.5	0.5	-140.56	-84.2	272.0	285.1	284.1	0.94	302.603			
400.0	399.9	377.7	377.7	0.7	0.6	-141.16	-83.6	273.5	289.1	287.8	1.29	223.763			
500.0	499.7	467.8	467.7	0.9	0.8	-142.34	-81.6	276.6	297.3	295.7	1.64	181.624			
600.0	599.1	553.0	552.7	1.1	1.0	-143.60	-81.0	283.0	312.7	310.8	1.98	157.707			
700.0	698.2	640.0	639.1	1.4	1.2	-144.90	-81.6	292.7	335.0	332.7	2.34	142.900			
800.0	796.6	731.4	729.7	1.7	1.4	-146.59	-81.2	305.1	362.5	359.7	2.73	132.929			
900.0	894.6	823.1	820.4	2.1	1.7	-148.82	-78.3	318.4	393.1	389.9	3.11	126.227			
1,000.0	992.5	911.3	907.3	2.5	2.0	-151.02	-74.0	332.3	425.5	422.0	3.49	121.825			
1,100.0	1,090.4	999.9	994.3	2.9	2.3	-153.38	-66.3	347.5	459.6	455.7	3.87	118.664			
1,200.0	1,188.4	1,093.1	1,085.2	3.2	2.7	-156.01	-54.3	363.9	494.8	490.6	4.26	116.083 SF			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 4-8-9 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 74-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		
0.0	0.0	0.0	0.0	0.0	0.0	98.49	-41.2	275.6	279.2					
100.0	100.0	82.5	82.5	0.1	0.1	98.51	-41.2	275.6	278.7	278.4	0.25	1,118.849		
200.0	200.0	182.8	182.8	0.3	0.3	98.61	-41.7	275.4	278.6	278.0	0.60	465.284	CC	
248.4	248.4	231.4	231.4	0.4	0.4	-149.04	-42.1	275.3	278.7	277.9	0.77	362.439		
300.0	300.0	283.2	283.2	0.5	0.5	-148.94	-42.7	275.0	278.7	277.8	0.95	293.355	ES	
400.0	399.9	383.5	383.5	0.7	0.7	-148.95	-44.3	274.5	281.4	280.1	1.30	215.793		
500.0	499.7	483.9	483.8	0.9	0.8	-149.13	-46.6	273.6	286.8	285.1	1.67	172.247		
600.0	599.1	583.2	583.1	1.1	1.0	-149.53	-49.3	272.6	295.2	293.2	2.03	145.263		
700.0	698.2	681.7	681.6	1.4	1.2	-150.36	-51.2	271.9	306.9	304.5	2.41	127.592		
800.0	796.6	780.5	780.3	1.7	1.4	-151.49	-52.6	271.4	321.8	319.0	2.79	115.516		
900.0	894.6	878.6	878.5	2.1	1.5	-152.87	-53.6	270.9	339.2	336.0	3.17	107.048		
1,000.0	992.5	977.0	976.9	2.5	1.7	-154.20	-54.5	270.2	356.8	353.2	3.55	100.472		
1,100.0	1,090.4	1,065.6	1,065.4	2.9	1.9	-155.05	-56.8	270.7	375.8	371.9	3.92	95.770		
1,200.0	1,188.4	1,150.9	1,150.5	3.2	2.0	-155.55	-60.8	273.7	397.9	393.6	4.30	92.573		
1,300.0	1,286.3	1,242.0	1,241.4	3.6	2.2	-155.80	-66.9	278.7	421.9	417.2	4.69	89.899		
1,400.0	1,384.2	1,324.3	1,323.2	4.0	2.4	-155.95	-72.7	285.3	448.4	443.4	5.07	88.380		
1,500.0	1,482.2	1,403.0	1,401.1	4.4	2.6	-155.92	-79.6	293.4	477.4	472.0	5.46	87.375	SF	

Cathedral Energy Services

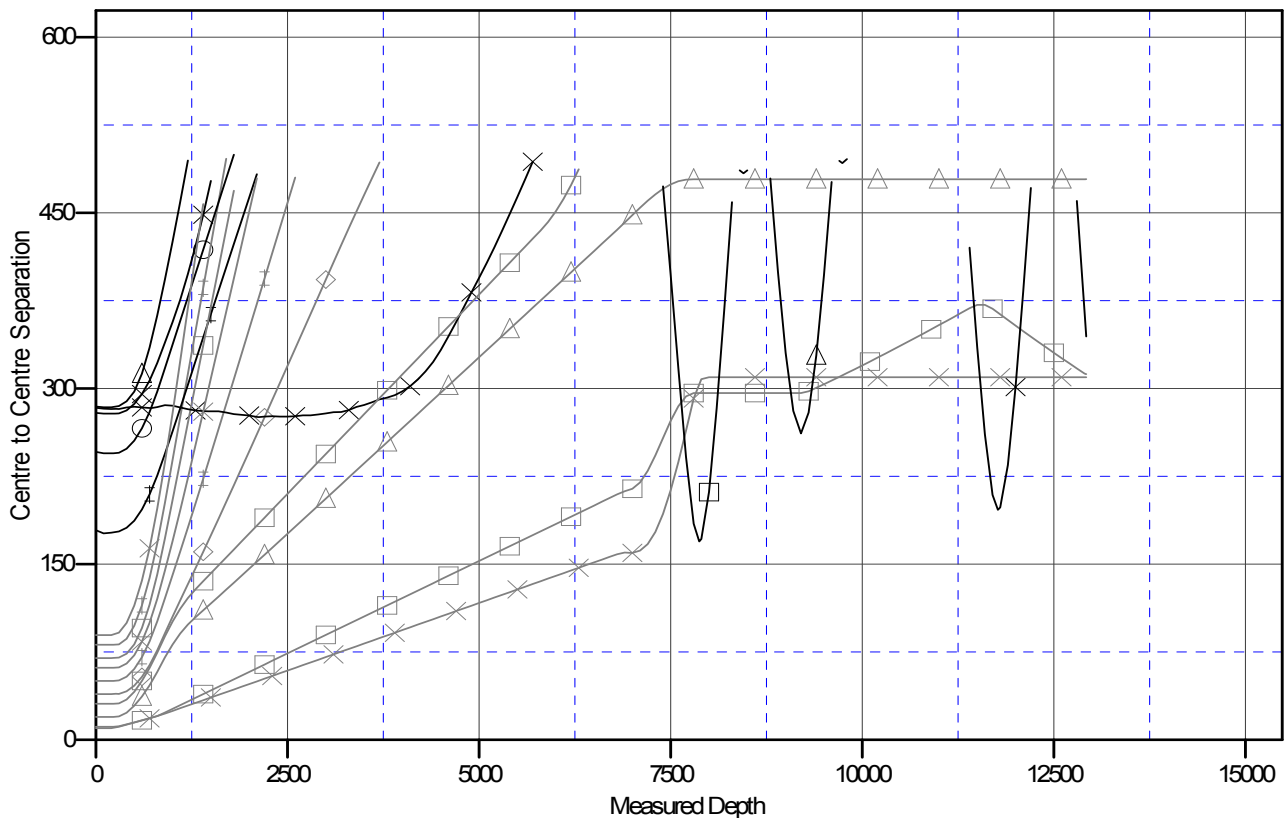
Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3A-9H-N267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	MD Reference:	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Sprague 3A-9H-N267	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 #3	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5011.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Sprague 3A-9H-N267
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.39°

Ladder Plot



LEGEND

3 V0	□ Sprague 3B-9H-N267, Hz, Plan #4 V0	▲ SPRAGUE 4-6-9 (EXISTING), ENCA
#3 V0	◆ DIER 8-6-8 (EXISTING), ENCANA WELL, SURVEYS V0	● SPRAGUE 24-9 J (EXISTING), MAC
2 V0	◇ Sprague 3E-9H-N267, Hz, Plan #3 V0	✕ Sprague 3G-9H-N267, Hz, Plan #2 V
A WELL, SURVEYS V0	✕ SPRAGUE 2-8-9 (EXISTING), ENCANA WELL, SURVEYS V0	■ SPRAGUE 14-9 (EXISTING), ENCA
V0	▲ SPRAGUE 13-9 (EXISTING), ENCANA WELL, SURVEYS V0	✕ Sprague 3J-9H-N267, Hz, Plan #3 V
ENCA WELL, EXISTING-VES GYRO V0	✕ SPRAGUE 4-8-9 (EXISTING), ENCANA WELL, SURVEYS V0	■ Sprague 3D-9H-N267, Hz, Plan #3 V
3 V0	✕ SHELEY 3A-4H (EXISTING), ENCANA WELL, SURVEYS V0	✕ SPRAGUE 11-9 (EXISTING), ENCA