

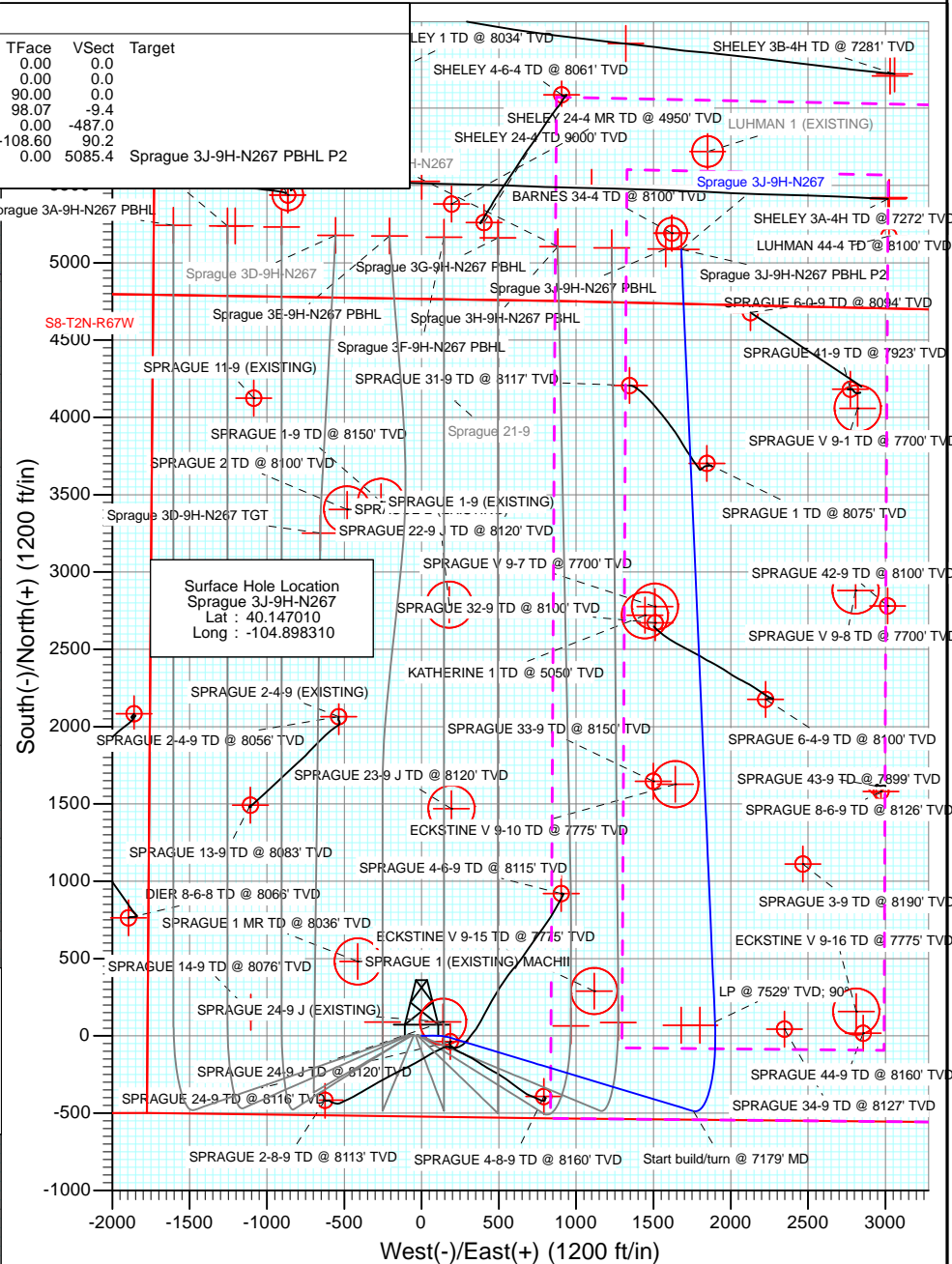
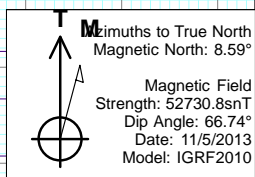
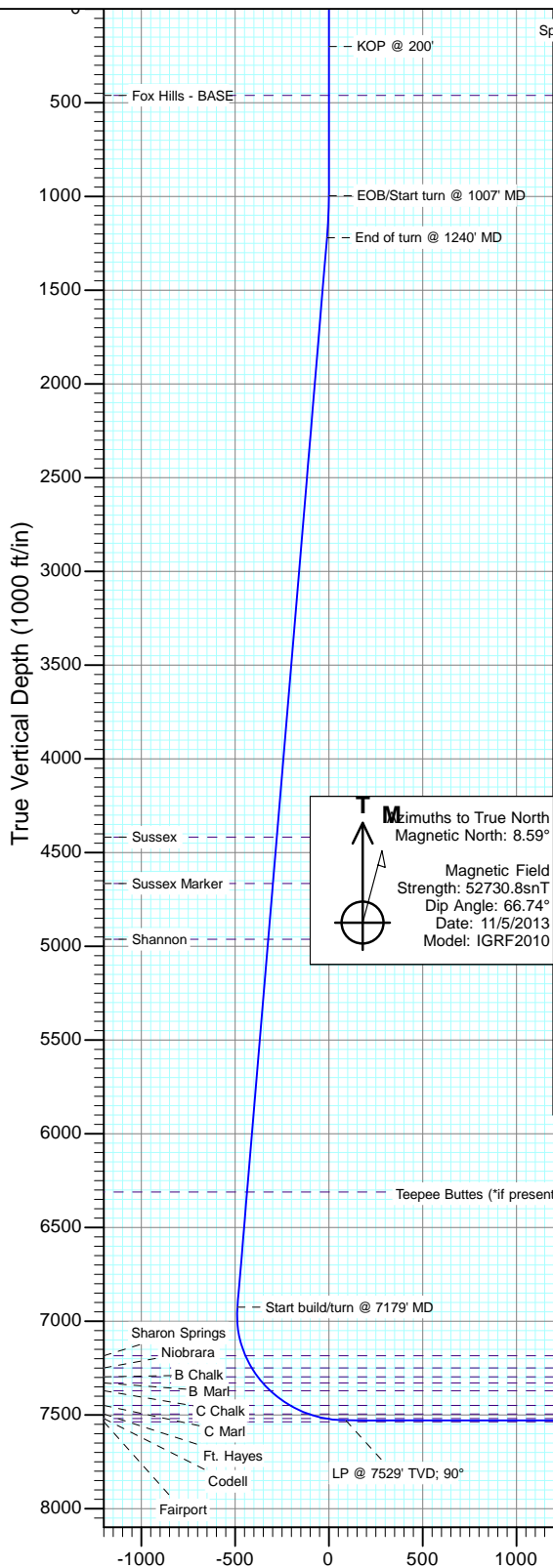


Project: DJ Wattenberg
Site: S9-T2N-R67W (Sprague)
Well: Sprague 3J-9H-N267
Wellbore: Hz
Design: Plan #2



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1007.5	16.15	90.00	996.8	0.0	113.1	2.00	90.00	0.0	
4	1240.4	16.15	106.80	1220.7	-9.4	176.5	2.00	98.07	-9.4	
5	7179.6	16.15	106.80	6925.5	-487.0	1758.0	0.00	0.00	-487.0	
6	8132.4	90.00	357.50	7529.0	90.2	1897.8	10.00	-108.60	90.2	
7	13132.4	90.00	357.50	7529.0	5085.4	1679.8	0.00	0.00	5085.4	Sprague 3J-9H-N267 PBHL P2



Plan #2
Sprague 3J-9H-N267
13xxx; LR
WELL @ 5011.0ft (Original Well Elev)
Ground Elevation @ 4981.0
North American Datum 1983
Well Sprague 3J-9H-N267, True North

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
461.0	461.4	Fox Hills - BASE
4418.0	4569.1	Sussex
4665.0	4826.2	Sussex Marker
4963.0	5136.5	Shannon
6311.0	6539.9	Teepee Buttes ("if present")
7184.0	7453.1	Sharon Springs
7249.0	7528.0	Niobrara
7297.0	7587.0	B Chalk
7329.0	7628.9	B Marl
7371.0	7688.1	C Chalk
7449.0	7820.2	C Marl
7495.0	7930.3	Ft. Hayes
7519.0	8023.2	Cogell

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-9H-N267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

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

Site		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 3J-9H-N267					
Well Position	+N/-S	0.0 ft	Northing:	1,296,972.40 ft	Latitude:	40.147010
	+E/-W	0.0 ft	Easting:	3,168,207.29 ft	Longitude:	-104.898310
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	11/5/2013	8.59	66.74	52,731

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	0.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,007.5	16.15	90.00	996.8	0.0	113.1	2.00	2.00	0.00	90.00	
1,240.4	16.15	106.80	1,220.7	-9.4	176.5	2.00	0.00	7.21	98.07	
7,179.6	16.15	106.80	6,925.5	-487.0	1,758.0	0.00	0.00	0.00	0.00	
8,132.4	90.00	357.50	7,529.0	90.2	1,897.8	10.00	7.75	-11.47	-108.60	
13,132.4	90.00	357.50	7,529.0	5,085.4	1,679.8	0.00	0.00	0.00	0.00	Sprague 3J-9H-N267

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-9H-N267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200'
300.0	2.00	90.00	300.0	0.0	1.7	0.0	2.00	2.00	
400.0	4.00	90.00	399.8	0.0	7.0	0.0	2.00	2.00	
461.4	5.23	90.00	461.0	0.0	11.9	0.0	2.00	2.00	Fox Hills - BASE
500.0	6.00	90.00	499.5	0.0	15.7	0.0	2.00	2.00	
600.0	8.00	90.00	598.7	0.0	27.9	0.0	2.00	2.00	
700.0	10.00	90.00	697.5	0.0	43.5	0.0	2.00	2.00	
800.0	12.00	90.00	795.6	0.0	62.6	0.0	2.00	2.00	
900.0	14.00	90.00	893.1	0.0	85.1	0.0	2.00	2.00	
1,000.0	16.00	90.00	989.6	0.0	111.0	0.0	2.00	2.00	
1,007.5	16.15	90.00	996.8	0.0	113.1	0.0	2.00	2.00	EOB/Start turn @ 1007' MD
1,100.0	15.99	96.66	1,085.7	-1.5	138.6	-1.5	2.00	-0.17	
1,200.0	16.06	103.91	1,181.9	-6.4	165.7	-6.4	2.00	0.06	
1,240.4	16.15	106.80	1,220.7	-9.4	176.5	-9.4	2.00	0.23	End of turn @ 1240' MD
1,300.0	16.15	106.80	1,277.9	-14.2	192.4	-14.2	0.00	0.00	
1,400.0	16.15	106.80	1,374.0	-22.2	219.0	-22.2	0.00	0.00	
1,500.0	16.15	106.80	1,470.0	-30.2	245.6	-30.2	0.00	0.00	
1,600.0	16.15	106.80	1,566.1	-38.3	272.2	-38.3	0.00	0.00	
1,700.0	16.15	106.80	1,662.1	-46.3	298.9	-46.3	0.00	0.00	
1,800.0	16.15	106.80	1,758.2	-54.4	325.5	-54.4	0.00	0.00	
1,900.0	16.15	106.80	1,854.3	-62.4	352.1	-62.4	0.00	0.00	
2,000.0	16.15	106.80	1,950.3	-70.5	378.8	-70.5	0.00	0.00	
2,100.0	16.15	106.80	2,046.4	-78.5	405.4	-78.5	0.00	0.00	
2,200.0	16.15	106.80	2,142.4	-86.5	432.0	-86.5	0.00	0.00	
2,300.0	16.15	106.80	2,238.5	-94.6	458.6	-94.6	0.00	0.00	
2,400.0	16.15	106.80	2,334.5	-102.6	485.3	-102.6	0.00	0.00	
2,500.0	16.15	106.80	2,430.6	-110.7	511.9	-110.7	0.00	0.00	
2,600.0	16.15	106.80	2,526.6	-118.7	538.5	-118.7	0.00	0.00	
2,700.0	16.15	106.80	2,622.7	-126.7	565.1	-126.7	0.00	0.00	
2,800.0	16.15	106.80	2,718.7	-134.8	591.8	-134.8	0.00	0.00	
2,900.0	16.15	106.80	2,814.8	-142.8	618.4	-142.8	0.00	0.00	
3,000.0	16.15	106.80	2,910.8	-150.9	645.0	-150.9	0.00	0.00	
3,100.0	16.15	106.80	3,006.9	-158.9	671.7	-158.9	0.00	0.00	
3,200.0	16.15	106.80	3,102.9	-167.0	698.3	-167.0	0.00	0.00	
3,300.0	16.15	106.80	3,199.0	-175.0	724.9	-175.0	0.00	0.00	
3,400.0	16.15	106.80	3,295.1	-183.0	751.5	-183.0	0.00	0.00	
3,500.0	16.15	106.80	3,391.1	-191.1	778.2	-191.1	0.00	0.00	
3,600.0	16.15	106.80	3,487.2	-199.1	804.8	-199.1	0.00	0.00	
3,700.0	16.15	106.80	3,583.2	-207.2	831.4	-207.2	0.00	0.00	
3,800.0	16.15	106.80	3,679.3	-215.2	858.0	-215.2	0.00	0.00	
3,900.0	16.15	106.80	3,775.3	-223.2	884.7	-223.2	0.00	0.00	
4,000.0	16.15	106.80	3,871.4	-231.3	911.3	-231.3	0.00	0.00	
4,100.0	16.15	106.80	3,967.4	-239.3	937.9	-239.3	0.00	0.00	
4,200.0	16.15	106.80	4,063.5	-247.4	964.6	-247.4	0.00	0.00	
4,300.0	16.15	106.80	4,159.5	-255.4	991.2	-255.4	0.00	0.00	
4,400.0	16.15	106.80	4,255.6	-263.5	1,017.8	-263.5	0.00	0.00	
4,500.0	16.15	106.80	4,351.6	-271.5	1,044.4	-271.5	0.00	0.00	
4,569.1	16.15	106.80	4,418.0	-277.1	1,062.8	-277.1	0.00	0.00	Sussex
4,600.0	16.15	106.80	4,447.7	-279.5	1,071.1	-279.5	0.00	0.00	
4,700.0	16.15	106.80	4,543.8	-287.6	1,097.7	-287.6	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-9H-N267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	16.15	106.80	4,639.8	-295.6	1,124.3	-295.6	0.00	0.00	
4,826.2	16.15	106.80	4,665.0	-297.7	1,131.3	-297.7	0.00	0.00	Sussex Marker
4,900.0	16.15	106.80	4,735.9	-303.7	1,151.0	-303.7	0.00	0.00	
5,000.0	16.15	106.80	4,831.9	-311.7	1,177.6	-311.7	0.00	0.00	
5,100.0	16.15	106.80	4,928.0	-319.7	1,204.2	-319.7	0.00	0.00	
5,136.5	16.15	106.80	4,963.0	-322.7	1,213.9	-322.7	0.00	0.00	Shannon
5,200.0	16.15	106.80	5,024.0	-327.8	1,230.8	-327.8	0.00	0.00	
5,300.0	16.15	106.80	5,120.1	-335.8	1,257.5	-335.8	0.00	0.00	
5,400.0	16.15	106.80	5,216.1	-343.9	1,284.1	-343.9	0.00	0.00	
5,500.0	16.15	106.80	5,312.2	-351.9	1,310.7	-351.9	0.00	0.00	
5,600.0	16.15	106.80	5,408.2	-360.0	1,337.3	-360.0	0.00	0.00	
5,700.0	16.15	106.80	5,504.3	-368.0	1,364.0	-368.0	0.00	0.00	
5,800.0	16.15	106.80	5,600.3	-376.0	1,390.6	-376.0	0.00	0.00	
5,900.0	16.15	106.80	5,696.4	-384.1	1,417.2	-384.1	0.00	0.00	
6,000.0	16.15	106.80	5,792.5	-392.1	1,443.9	-392.1	0.00	0.00	
6,100.0	16.15	106.80	5,888.5	-400.2	1,470.5	-400.2	0.00	0.00	
6,200.0	16.15	106.80	5,984.6	-408.2	1,497.1	-408.2	0.00	0.00	
6,300.0	16.15	106.80	6,080.6	-416.2	1,523.7	-416.2	0.00	0.00	
6,400.0	16.15	106.80	6,176.7	-424.3	1,550.4	-424.3	0.00	0.00	
6,500.0	16.15	106.80	6,272.7	-432.3	1,577.0	-432.3	0.00	0.00	
6,539.9	16.15	106.80	6,311.0	-435.5	1,587.6	-435.5	0.00	0.00	Teepee Buttes (*if present)
6,600.0	16.15	106.80	6,368.8	-440.4	1,603.6	-440.4	0.00	0.00	
6,700.0	16.15	106.80	6,464.8	-448.4	1,630.2	-448.4	0.00	0.00	
6,800.0	16.15	106.80	6,560.9	-456.5	1,656.9	-456.5	0.00	0.00	
6,900.0	16.15	106.80	6,656.9	-464.5	1,683.5	-464.5	0.00	0.00	
7,000.0	16.15	106.80	6,753.0	-472.5	1,710.1	-472.5	0.00	0.00	
7,100.0	16.15	106.80	6,849.0	-480.6	1,736.8	-480.6	0.00	0.00	
7,179.6	16.15	106.80	6,925.5	-487.0	1,758.0	-487.0	0.00	0.00	Start build/turn @ 7179' MD
7,200.0	15.62	99.60	6,945.1	-488.3	1,763.4	-488.3	10.00	-2.62	
7,300.0	16.68	63.27	7,041.4	-484.0	1,789.5	-484.0	10.00	1.07	
7,400.0	22.54	38.69	7,135.7	-462.6	1,814.4	-462.6	10.00	5.86	
7,453.1	26.63	30.53	7,184.0	-444.4	1,826.8	-444.4	10.00	7.71	Sharon Springs
7,500.0	30.54	25.10	7,225.2	-424.5	1,837.2	-424.5	10.00	8.33	
7,528.0	32.96	22.43	7,249.0	-411.0	1,843.1	-411.0	10.00	8.65	Niobrara
7,587.0	38.22	17.81	7,297.0	-378.8	1,854.9	-378.8	10.00	8.91	B Chalk
7,600.0	39.40	16.94	7,307.1	-371.0	1,857.3	-371.0	10.00	9.07	
7,628.9	42.04	15.14	7,329.0	-352.9	1,862.5	-352.9	10.00	9.15	B Marl
7,688.1	47.53	11.99	7,371.0	-312.4	1,872.2	-312.4	10.00	9.27	C Chalk
7,700.0	48.64	11.42	7,379.0	-303.7	1,874.0	-303.7	10.00	9.35	
7,800.0	58.08	7.30	7,438.6	-224.6	1,886.9	-224.6	10.00	9.44	
7,820.2	60.01	6.58	7,449.0	-207.4	1,889.0	-207.4	10.00	9.52	C Marl
7,900.0	67.63	3.96	7,484.2	-136.2	1,895.5	-136.2	10.00	9.56	
7,930.3	70.54	3.04	7,495.0	-107.9	1,897.2	-107.9	10.00	9.59	Ft. Hayes
8,000.0	77.24	1.05	7,514.3	-41.0	1,899.6	-41.0	10.00	9.62	
8,023.2	79.47	0.41	7,519.0	-18.3	1,899.9	-18.3	10.00	9.63	Codell
8,100.0	86.88	358.35	7,528.1	57.9	1,899.0	57.9	10.00	9.64	
8,132.4	90.00	357.50	7,529.0	90.2	1,897.8	90.2	10.00	9.65	LP @ 7529' TVD; 90°
8,200.0	90.00	357.50	7,529.0	157.8	1,894.9	157.8	0.00	0.00	
8,300.0	90.00	357.50	7,529.0	257.7	1,890.5	257.7	0.00	0.00	
8,400.0	90.00	357.50	7,529.0	357.6	1,886.2	357.6	0.00	0.00	
8,500.0	90.00	357.50	7,529.0	457.5	1,881.8	457.5	0.00	0.00	
8,600.0	90.00	357.50	7,529.0	557.4	1,877.5	557.4	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-9H-N267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,700.0	90.00	357.50	7,529.0	657.3	1,873.1	657.3	0.00	0.00	
8,800.0	90.00	357.50	7,529.0	757.2	1,868.7	757.2	0.00	0.00	
8,900.0	90.00	357.50	7,529.0	857.1	1,864.4	857.1	0.00	0.00	
9,000.0	90.00	357.50	7,529.0	957.0	1,860.0	957.0	0.00	0.00	
9,100.0	90.00	357.50	7,529.0	1,056.9	1,855.6	1,056.9	0.00	0.00	
9,200.0	90.00	357.50	7,529.0	1,156.8	1,851.3	1,156.8	0.00	0.00	
9,300.0	90.00	357.50	7,529.0	1,256.7	1,846.9	1,256.7	0.00	0.00	
9,400.0	90.00	357.50	7,529.0	1,356.6	1,842.6	1,356.6	0.00	0.00	
9,500.0	90.00	357.50	7,529.0	1,456.5	1,838.2	1,456.5	0.00	0.00	
9,600.0	90.00	357.50	7,529.0	1,556.5	1,833.8	1,556.5	0.00	0.00	
9,700.0	90.00	357.50	7,529.0	1,656.4	1,829.5	1,656.4	0.00	0.00	
9,800.0	90.00	357.50	7,529.0	1,756.3	1,825.1	1,756.3	0.00	0.00	
9,900.0	90.00	357.50	7,529.0	1,856.2	1,820.7	1,856.2	0.00	0.00	
10,000.0	90.00	357.50	7,529.0	1,956.1	1,816.4	1,956.1	0.00	0.00	
10,100.0	90.00	357.50	7,529.0	2,056.0	1,812.0	2,056.0	0.00	0.00	
10,200.0	90.00	357.50	7,529.0	2,155.9	1,807.7	2,155.9	0.00	0.00	
10,300.0	90.00	357.50	7,529.0	2,255.8	1,803.3	2,255.8	0.00	0.00	
10,400.0	90.00	357.50	7,529.0	2,355.7	1,798.9	2,355.7	0.00	0.00	
10,500.0	90.00	357.50	7,529.0	2,455.6	1,794.6	2,455.6	0.00	0.00	
10,600.0	90.00	357.50	7,529.0	2,555.5	1,790.2	2,555.5	0.00	0.00	
10,700.0	90.00	357.50	7,529.0	2,655.4	1,785.8	2,655.4	0.00	0.00	
10,800.0	90.00	357.50	7,529.0	2,755.3	1,781.5	2,755.3	0.00	0.00	
10,900.0	90.00	357.50	7,529.0	2,855.2	1,777.1	2,855.2	0.00	0.00	
11,000.0	90.00	357.50	7,529.0	2,955.1	1,772.8	2,955.1	0.00	0.00	
11,100.0	90.00	357.50	7,529.0	3,055.0	1,768.4	3,055.0	0.00	0.00	
11,200.0	90.00	357.50	7,529.0	3,154.9	1,764.0	3,154.9	0.00	0.00	
11,300.0	90.00	357.50	7,529.0	3,254.8	1,759.7	3,254.8	0.00	0.00	
11,400.0	90.00	357.50	7,529.0	3,354.7	1,755.3	3,354.7	0.00	0.00	
11,500.0	90.00	357.50	7,529.0	3,454.6	1,751.0	3,454.6	0.00	0.00	
11,600.0	90.00	357.50	7,529.0	3,554.5	1,746.6	3,554.5	0.00	0.00	
11,700.0	90.00	357.50	7,529.0	3,654.5	1,742.2	3,654.5	0.00	0.00	
11,800.0	90.00	357.50	7,529.0	3,754.4	1,737.9	3,754.4	0.00	0.00	
11,900.0	90.00	357.50	7,529.0	3,854.3	1,733.5	3,854.3	0.00	0.00	
12,000.0	90.00	357.50	7,529.0	3,954.2	1,729.1	3,954.2	0.00	0.00	
12,100.0	90.00	357.50	7,529.0	4,054.1	1,724.8	4,054.1	0.00	0.00	
12,200.0	90.00	357.50	7,529.0	4,154.0	1,720.4	4,154.0	0.00	0.00	
12,300.0	90.00	357.50	7,529.0	4,253.9	1,716.1	4,253.9	0.00	0.00	
12,400.0	90.00	357.50	7,529.0	4,353.8	1,711.7	4,353.8	0.00	0.00	
12,500.0	90.00	357.50	7,529.0	4,453.7	1,707.3	4,453.7	0.00	0.00	
12,600.0	90.00	357.50	7,529.0	4,553.6	1,703.0	4,553.6	0.00	0.00	
12,700.0	90.00	357.50	7,529.0	4,653.5	1,698.6	4,653.5	0.00	0.00	
12,800.0	90.00	357.50	7,529.0	4,753.4	1,694.2	4,753.4	0.00	0.00	
12,900.0	90.00	357.50	7,529.0	4,853.3	1,689.9	4,853.3	0.00	0.00	
13,000.0	90.00	357.50	7,529.0	4,953.2	1,685.5	4,953.2	0.00	0.00	
13,100.0	90.00	357.50	7,529.0	5,053.1	1,681.2	5,053.1	0.00	0.00	
13,132.4	90.00	357.50	7,529.0	5,085.4	1,679.8	5,085.4	0.00	0.00	TD at 13132.4

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-9H-N267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Sprague 3J-9H-N267 PE - plan hits target center - Point	0.00	0.00	7,529.0	5,085.4	1,679.8	1,302,069.13	3,169,852.50	40.160970	-104.892300
Sprague 3J-9H-N267 TC - plan misses target center by 98.6ft at 8114.8ft MD (7528.7 TVD, 72.7 N, 1898.5 E) - Point	0.00	0.00	7,529.0	69.1	1,800.0	1,297,053.72	3,170,006.78	40.147199	-104.891871
Sprague 3J-9H-N267 PE - plan misses target center by 100.7ft at 13132.4ft MD (7529.0 TVD, 5085.4 N, 1679.8 E) - Point	0.00	0.00	7,529.0	5,089.1	1,579.1	1,302,072.08	3,169,751.86	40.160980	-104.892660
Sprague 3J-9H-N267 TC - plan misses target center by 219.5ft at 8119.2ft MD (7528.9 TVD, 77.0 N, 1898.4 E) - Point	0.00	0.00	7,529.0	69.1	1,679.0	1,297,052.90	3,169,885.78	40.147199	-104.892304

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
461.4	461.0	Fox Hills - BASE				
4,569.1	4,418.0	Sussex				
4,826.2	4,665.0	Sussex Marker				
5,136.5	4,963.0	Shannon				
6,539.9	6,311.0	Teepee Buttes (*if present)				
7,453.1	7,184.0	Sharon Springs				
7,528.0	7,249.0	Niobrara				
7,587.0	7,297.0	B Chalk				
7,628.9	7,329.0	B Marl				
7,688.1	7,371.0	C Chalk				
7,820.2	7,449.0	C Marl				
7,930.3	7,495.0	Ft. Hayes				
8,023.2	7,519.0	Codell				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
1,007.5	996.8	0.0	113.1	EOB/Start turn @ 1007' MD
1,240.4	1,220.7	-9.4	176.5	End of turn @ 1240' MD
7,179.6	6,925.5	-487.0	1,758.0	Start build/turn @ 7179' MD
8,132.4	7,529.0	90.2	1,897.8	LP @ 7529' TVD; 90°
13,132.4	7,529.0	5,085.4	1,679.8	TD at 13132.4

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S9-T2N-R67W (Sprague)

Sprague 3J-9H-N267

Hz

Plan #2

Anticollision Report

11 December, 2013

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	12/11/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	13,132.2	Plan #2 (Hz)	Geolink MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S9-T2N-R67W (Sprague)						
BARNES 34-4 (EXISTING) - ENCANA WELL - ENCANA	13,132.4	7,444.0	121.9	18.2	1.176	Level 2, CC, ES, SF
DIER 1 (EXISTING) - ENCANA WELL - NO SURVEYS						Out of range
DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
ECKSTINE V 9-10 (EXISTING) - NOBLE WELL - NO SU	9,679.6	7,482.0	189.7	144.4	4.192	CC, ES
ECKSTINE V 9-10 (EXISTING) - NOBLE WELL - NO SU	9,700.0	7,482.0	190.8	145.2	4.186	SF
ECKSTINE V 9-15 (EXISTING) - NOBLE WELL - NO SU						Out of range
ECKSTINE V 9-15 (EXISTING) - NOBLE WELL - NO SU						Out of range
ECKSTINE V 9-15 (EXISTING) - NOBLE WELL - NO SU						Out of range
ECKSTINE V 9-16 (EXISTING) - NOBLE WELL - NO SU						Out of range
ECKSTINE V 9-16 (EXISTING) - NOBLE WELL - NO SU						Out of range
KATHERINE 1 (EXISTING) - MACEY-MERSHON WELL						Out of range
LUHMAN 1 (EXISTING) - ENCANA WELL - Existing						Out of range
LUHMAN 44-4 (EXISTING) - ENCANA WELL - NO SURV						Out of range
SATER 40N-5HZ (EXISTING) - KERR-MCGEE WELL - S						Out of range
SHELEY 1 (EXISTING) - ENCANA WELL - NO SURVEY						Out of range
SHELEY 14-4 (EXISTING) - ENCANA WELL - NO SURV						Out of range
SHELEY 24-4 (EXISTING MR) - MACHII-ROSS WELL -						Out of range
SHELEY 24-4 (EXISTING) - ENCANA WELL - NO SURV						Out of range
SHELEY 3A-4H (EXISTING) - ENCANA WELL - SURVE	13,132.4	10,375.3	424.3	382.2	10.080	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 - NO SURVE	11,743.6	7,460.0	105.6	25.9	1.325	Level 3, CC, ES, SF
SPRAGUE 1 (EXISTING) MACHII - MACHII-ROSS WEL						Out of range
SPRAGUE 1 (EXISTING) MACHII - MACHII-ROSS WEL						Out of range
SPRAGUE 11-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
SPRAGUE 13-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
SPRAGUE 14-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
SPRAGUE 14-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
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 - 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 - NO SUR	1,303.0	1,249.8	24.1	17.7	3.749	CC, ES, SF
SPRAGUE 2-4-9 (EXISTING) - ENCANA WELL - Plan #1						Out of range
SPRAGUE 2-4-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 24-9 J (EXISTING) - MACHII-ROSS WELL -	1,074.0	1,036.8	91.9	87.0	18.492	CC, ES
SPRAGUE 24-9 J (EXISTING) - MACHII-ROSS WELL -	1,200.0	1,157.9	100.7	95.0	17.731	SF
SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVE	958.4	932.0	89.2	84.6	19.142	CC, ES
SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVE	1,000.0	968.8	91.2	86.1	18.176	SF
SPRAGUE 31-9 (EXISTING) - ENCANA WELL - SURVE	12,218.9	7,528.1	300.2	211.2	3.372	CC, ES, SF
SPRAGUE 32-9 (EXISTING) - ENCANA WELL - NO SUR	10,728.3	7,473.0	274.1	211.6	4.387	CC, ES, SF
SPRAGUE 33-9 (EXISTING) - ENCANA WELL - NO SUR	9,705.1	7,483.0	331.0	285.3	7.250	CC, ES, SF
SPRAGUE 34-9 (EXISTING) - ENCANA WELL - NO SUR	8,077.6	7,495.5	447.4	420.3	16.531	CC, ES, SF
SPRAGUE 3-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
SPRAGUE 3-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
Sprague 3A-9H-N267 - Hz - Plan #1	200.0	200.0	89.5	88.9	150.874	CC, ES
Sprague 3A-9H-N267 - Hz - Plan #1	600.0	581.7	142.5	140.6	72.715	SF
Sprague 3B-9H-N267 - Hz - Plan #1	200.0	200.0	78.4	77.8	132.048	CC, ES
Sprague 3B-9H-N267 - Hz - Plan #1	600.0	588.1	119.9	118.0	60.971	SF
Sprague 3C-9H-N267 - Hz - Plan #1	200.0	200.0	70.0	69.4	117.931	CC, ES
Sprague 3C-9H-N267 - Hz - Plan #1	600.0	595.9	100.7	98.7	50.981	SF

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	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)						
Sprague 3D-9H-N267 - Hz - Plan #1	200.0	200.0	58.8	58.2	99.117	CC, ES
Sprague 3D-9H-N267 - Hz - Plan #1	600.0	597.4	87.4	85.4	44.205	SF
Sprague 3E-9H-N267 - Hz - Plan #1	200.0	200.0	50.4	49.9	85.015	CC, ES
Sprague 3E-9H-N267 - Hz - Plan #1	600.0	596.2	84.0	81.9	41.780	SF
Sprague 3F-9H-N267 - Hz - Plan #1	200.0	200.0	39.3	38.7	66.232	CC, ES
Sprague 3F-9H-N267 - Hz - Plan #1	500.0	499.5	54.9	53.3	33.595	SF
Sprague 3G-9H-N267 - Hz - Plan #1	200.0	200.0	28.2	27.6	47.498	CC, ES
Sprague 3G-9H-N267 - Hz - Plan #1	500.0	500.0	43.1	41.5	26.347	SF
Sprague 3H-9H-N267 - Hz - Plan #2	200.0	200.0	19.9	19.3	33.527	CC, ES
Sprague 3H-9H-N267 - Hz - Plan #2	500.0	500.5	33.9	32.2	20.685	SF
Sprague 3I-9H-N267 - Hz - Plan #2	200.0	200.0	8.4	7.8	14.133	CC, ES
Sprague 3I-9H-N267 - Hz - Plan #2	400.0	400.3	13.8	12.5	10.664	SF
SPRAGUE 41-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 41-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 41-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 42-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
SPRAGUE 43-9 (EXISTING) - ENCANA WELL - GYRO						Out of range
SPRAGUE 43-9 (EXISTING) - ENCANA WELL - GYRO						Out of range
SPRAGUE 44-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
SPRAGUE 44-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
SPRAGUE 4-6-9 (EXISTING) - ENCANA WELL - SURVE	1,391.2	1,338.7	107.0	101.8	20.556	CC
SPRAGUE 4-6-9 (EXISTING) - ENCANA WELL - SURVE	1,400.0	1,346.6	107.0	101.8	20.296	ES
SPRAGUE 4-6-9 (EXISTING) - ENCANA WELL - SURVE	1,600.0	1,530.1	133.9	126.3	17.689	SF
SPRAGUE 4-8-9 (EXISTING) - ENCANA WELL - SURVE	1,302.6	1,260.1	50.3	43.8	7.745	CC, ES
SPRAGUE 4-8-9 (EXISTING) - ENCANA WELL - SURVE	1,400.0	1,355.6	53.3	46.2	7.497	SF
SPRAGUE 6-0-9 (EXISTING) - ENCANA WELL - PLAN O	12,705.3	7,521.6	429.0	329.8	4.325	CC, ES, SF
SPRAGUE 6-4-9 (EXISTING) - ENCANA WELL - SURVE	10,206.0	7,594.3	436.2	379.6	7.710	CC, ES
SPRAGUE 6-4-9 (EXISTING) - ENCANA WELL - SURVE	10,300.0	7,593.6	446.2	388.1	7.675	SF
SPRAGUE 8-6-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 8-6-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 8-6-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE V 9-1 (EXISTING) - NOBLE WELL - NO SUR						Out of range
SPRAGUE V 9-1 (EXISTING) - NOBLE WELL - NO SUR						Out of range
SPRAGUE V 9-1 (EXISTING) - NOBLE WELL - NO SUR						Out of range
SPRAGUE V 9-7 (EXISTING) - NOBLE WELL - NO SUR	10,832.4	7,478.0	270.9	206.7	4.217	CC, ES, SF
SPRAGUE V 9-8 (EXISTING) - NOBLE WELL - NO SUR						Out of range
SPRAGUE V 9-8 (EXISTING) - NOBLE WELL - NO SUR						Out of range

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - BARNES 34-4 (EXISTING) - ENCANA WELL - ENCANA WELL													Offset Site Error: 0.0 ft
Survey Program: 8100-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
12,800.0	7,529.0	7,444.0	7,444.0	91.4	13.0	-90.00	5,191.1	1,618.8	444.1	346.2	97.95	4.534	
12,900.0	7,529.0	7,444.0	7,444.0	93.0	13.0	-90.00	5,191.1	1,618.8	345.1	245.5	99.68	3.463	
13,000.0	7,529.0	7,444.0	7,444.0	94.6	13.0	-90.00	5,191.1	1,618.8	247.0	145.6	101.41	2.436	
13,100.0	7,529.0	7,444.0	7,444.0	96.2	13.0	-90.00	5,191.1	1,618.8	151.4	48.2	103.15	1.468	Level 3
13,132.4	7,529.0	7,444.0	7,444.0	96.8	13.0	-90.00	5,191.1	1,618.8	121.9	18.2	103.71	1.176	Level 2, CC, ES, SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - ECKSTINE V 9-10 (EXISTING) - NOBLE WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 7775-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			
9,300.0	7,529.0	7,482.0	7,482.0	43.1	13.1	-90.00	1,627.7	1,640.9	424.3	384.9	39.40	10.769		
9,400.0	7,529.0	7,482.0	7,482.0	44.0	13.1	-90.00	1,627.7	1,640.9	337.8	296.9	40.91	8.258		
9,500.0	7,529.0	7,482.0	7,482.0	44.9	13.1	-90.00	1,627.7	1,640.9	261.2	218.8	42.44	6.154		
9,600.0	7,529.0	7,482.0	7,482.0	46.0	13.1	-90.00	1,627.7	1,640.9	205.7	161.7	44.00	4.675		
9,679.6	7,529.0	7,482.0	7,482.0	46.8	13.1	-90.00	1,627.7	1,640.9	189.7	144.4	45.25	4.192 CC, ES		
9,700.0	7,529.0	7,482.0	7,482.0	47.0	13.1	-90.00	1,627.7	1,640.9	190.8	145.2	45.57	4.186 SF		
9,800.0	7,529.0	7,482.0	7,482.0	48.1	13.1	-90.00	1,627.7	1,640.9	224.7	177.5	47.17	4.764		
9,900.0	7,529.0	7,482.0	7,482.0	49.3	13.1	-90.00	1,627.7	1,640.9	290.8	242.0	48.78	5.962		
10,000.0	7,529.0	7,482.0	7,482.0	50.4	13.1	-90.00	1,627.7	1,640.9	372.4	322.0	50.40	7.388		
10,100.0	7,529.0	7,482.0	7,482.0	51.6	13.1	-90.00	1,627.7	1,640.9	461.3	409.2	52.04	8.864		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SHELEY 3A-4H (EXISTING) - ENCANA WELL - SURVEYS												Offset Site Error:	0.0 ft
Survey Program: 162-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,100.0	7,529.0	10,378.0	7,253.3	96.2	73.0	11.13	5,464.4	1,700.6	453.3	410.6	42.78	10.598	
13,132.4	7,529.0	10,375.3	7,253.2	96.8	72.9	10.34	5,464.5	1,697.9	424.3	382.2	42.09	10.080	CC, ES, SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 1 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8075-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		
11,300.0	7,529.0	7,460.0	7,460.0	68.1	13.0	90.00	3,702.6	1,845.9	456.0	383.9	72.15	6.320		
11,400.0	7,529.0	7,460.0	7,460.0	69.6	13.0	90.00	3,702.6	1,845.9	359.5	285.6	73.86	4.867		
11,500.0	7,529.0	7,460.0	7,460.0	71.1	13.0	90.00	3,702.6	1,845.9	265.5	190.0	75.57	3.514		
11,600.0	7,529.0	7,460.0	7,460.0	72.6	13.0	90.00	3,702.6	1,845.9	178.3	101.0	77.28	2.307		
11,700.0	7,529.0	7,460.0	7,460.0	74.1	13.0	90.00	3,702.6	1,845.9	114.3	35.3	79.00	1.447 Level 3		
11,743.6	7,529.0	7,460.0	7,460.0	74.8	13.0	90.00	3,702.6	1,845.9	105.6	25.9	79.75	1.325 Level 3, CC, ES, SF		
11,800.0	7,529.0	7,460.0	7,460.0	75.6	13.0	90.00	3,702.6	1,845.9	119.8	39.0	80.72	1.484 Level 3		
11,900.0	7,529.0	7,460.0	7,460.0	77.2	13.0	90.00	3,702.6	1,845.9	188.7	106.3	82.44	2.289		
12,000.0	7,529.0	7,460.0	7,460.0	78.7	13.0	90.00	3,702.6	1,845.9	277.3	193.2	84.16	3.295		
12,100.0	7,529.0	7,460.0	7,460.0	80.3	13.0	90.00	3,702.6	1,845.9	371.7	285.8	85.88	4.328		
12,200.0	7,529.0	7,460.0	7,460.0	81.9	13.0	90.00	3,702.6	1,845.9	468.5	380.9	87.60	5.348		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 24-9 (EXISTING) - ENCANA WELL - NO SURVEYS														Offset Site Error:	0.0 ft
Survey Program: 8116-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	101.39	-37.5	186.2	192.4						
100.0	100.0	69.0	69.0	0.1	0.1	101.39	-37.5	186.2	189.9	189.7	0.24	782.222			
200.0	200.0	169.0	169.0	0.3	0.3	101.39	-37.5	186.2	189.9	189.3	0.59	320.890			
300.0	300.0	269.0	269.0	0.5	0.5	11.50	-37.5	186.2	188.2	187.3	0.94	200.072			
400.0	399.8	368.8	368.8	0.7	0.6	11.85	-37.5	186.2	183.1	181.8	1.29	142.013			
500.0	499.5	468.5	468.5	0.9	0.8	12.48	-37.5	186.2	174.6	172.9	1.64	106.591			
600.0	598.7	567.7	567.7	1.2	1.0	13.46	-37.5	186.2	162.7	160.7	1.99	81.858			
700.0	697.5	666.5	666.5	1.5	1.2	14.95	-37.5	186.2	147.5	145.2	2.34	62.997			
800.0	795.6	764.6	764.6	1.9	1.3	17.24	-37.5	186.2	129.1	126.4	2.71	47.686			
900.0	893.1	862.1	862.1	2.3	1.5	20.93	-37.5	186.2	107.8	104.7	3.11	34.676			
1,000.0	989.6	958.6	958.6	2.8	1.7	27.43	-37.5	186.2	84.0	80.4	3.61	23.284			
1,100.0	1,085.7	1,054.7	1,054.7	3.3	1.8	31.46	-37.5	186.2	59.7	55.4	4.28	13.960			
1,200.0	1,181.9	1,150.9	1,150.9	3.8	2.0	43.86	-37.5	186.2	37.3	32.0	5.28	7.054			
1,300.0	1,277.9	1,246.9	1,246.9	4.3	2.2	88.09	-37.5	186.2	24.2	17.7	6.44	3.752			
1,303.0	1,280.8	1,249.8	1,249.8	4.3	2.2	90.00	-37.5	186.2	24.1	17.7	6.44	3.749 CC, ES, SF			
1,400.0	1,374.0	1,343.0	1,343.0	4.8	2.3	137.02	-37.5	186.2	36.2	30.6	5.61	6.450			
1,500.0	1,470.0	1,439.0	1,439.0	5.3	2.5	155.36	-37.5	186.2	59.9	54.6	5.32	11.257			
1,600.0	1,566.1	1,535.1	1,535.1	5.9	2.7	163.08	-37.5	186.2	86.1	80.6	5.47	15.733			
1,700.0	1,662.1	1,631.1	1,631.1	6.4	2.8	167.18	-37.5	186.2	113.0	107.3	5.74	19.679			
1,800.0	1,758.2	1,727.2	1,727.2	6.9	3.0	169.69	-37.5	186.2	140.3	134.3	6.06	23.172			
1,900.0	1,854.3	1,823.3	1,823.3	7.4	3.2	171.39	-37.5	186.2	167.8	161.4	6.38	26.288			
2,000.0	1,950.3	1,919.3	1,919.3	8.0	3.3	172.61	-37.5	186.2	195.4	188.7	6.72	29.088			
2,100.0	2,046.4	2,015.4	2,015.4	8.5	3.5	173.53	-37.5	186.2	223.0	215.9	7.05	31.618			
2,200.0	2,142.4	2,111.4	2,111.4	9.0	3.7	174.25	-37.5	186.2	250.7	243.3	7.39	33.916			
2,300.0	2,238.5	2,207.5	2,207.5	9.5	3.9	174.82	-37.5	186.2	278.4	270.6	7.73	36.013			
2,400.0	2,334.5	2,303.5	2,303.5	10.1	4.0	175.29	-37.5	186.2	306.1	298.0	8.07	37.934			
2,500.0	2,430.6	2,399.6	2,399.6	10.6	4.2	175.68	-37.5	186.2	333.8	325.4	8.41	39.702			
2,600.0	2,526.6	2,495.6	2,495.6	11.1	4.4	176.01	-37.5	186.2	361.6	352.8	8.75	41.332			
2,700.0	2,622.7	2,591.7	2,591.7	11.6	4.5	176.30	-37.5	186.2	389.3	380.2	9.09	42.842			
2,800.0	2,718.7	2,687.7	2,687.7	12.2	4.7	176.55	-37.5	186.2	417.1	407.7	9.43	44.244			
2,900.0	2,814.8	2,783.8	2,783.8	12.7	4.9	176.76	-37.5	186.2	444.9	435.1	9.77	45.548			
3,000.0	2,910.8	2,879.8	2,879.8	13.2	5.0	176.95	-37.5	186.2	472.6	462.5	10.11	46.766			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	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	56.91	90.7	139.2	167.9						
100.0	100.0	76.0	76.0	0.1	0.1	56.91	90.7	139.2	166.2	165.9	0.26	651.569			
200.0	200.0	176.0	176.0	0.3	0.3	56.91	90.7	139.2	166.2	165.6	0.60	275.064			
300.0	300.0	276.0	276.0	0.5	0.5	-33.44	90.7	139.2	164.7	163.7	0.95	172.631			
400.0	399.8	375.8	375.8	0.7	0.7	-34.51	90.7	139.2	160.4	159.1	1.31	122.499			
500.0	499.5	475.5	475.5	0.9	0.8	-36.44	90.7	139.2	153.3	151.6	1.68	91.448			
600.0	598.7	574.7	574.7	1.2	1.0	-39.45	90.7	139.2	143.6	141.5	2.07	69.517			
700.0	697.5	673.5	673.5	1.5	1.2	-43.91	90.7	139.2	131.9	129.4	2.50	52.762			
800.0	795.6	771.6	771.6	1.9	1.3	-50.44	90.7	139.2	118.7	115.7	3.01	39.474			
900.0	893.1	869.1	869.1	2.3	1.5	-59.93	90.7	139.2	105.6	102.0	3.64	29.058			
1,000.0	989.6	965.6	965.6	2.8	1.7	-73.34	90.7	139.2	95.0	90.6	4.40	21.579			
1,074.0	1,060.8	1,036.8	1,036.8	3.2	1.8	-90.00	90.7	139.2	91.9	87.0	4.97	18.492 CC, ES			
1,100.0	1,085.7	1,061.7	1,061.7	3.3	1.9	-96.02	90.7	139.2	92.2	87.0	5.15	17.902			
1,200.0	1,181.9	1,157.9	1,157.9	3.8	2.0	-118.20	90.7	139.2	100.7	95.0	5.68	17.731 SF			
1,300.0	1,277.9	1,253.9	1,253.9	4.3	2.2	-132.53	90.7	139.2	117.6	111.6	6.02	19.538			
1,400.0	1,374.0	1,350.0	1,350.0	4.8	2.4	-140.92	90.7	139.2	138.2	132.0	6.28	22.013			
1,500.0	1,470.0	1,446.0	1,446.0	5.3	2.5	-147.10	90.7	139.2	161.1	154.6	6.52	24.723			
1,600.0	1,566.1	1,542.1	1,542.1	5.9	2.7	-151.73	90.7	139.2	185.3	178.6	6.75	27.456			
1,700.0	1,662.1	1,638.1	1,638.1	6.4	2.9	-155.30	90.7	139.2	210.4	203.4	6.99	30.104			
1,800.0	1,758.2	1,734.2	1,734.2	6.9	3.0	-158.11	90.7	139.2	236.1	228.9	7.24	32.616			
1,900.0	1,854.3	1,830.3	1,830.3	7.4	3.2	-160.36	90.7	139.2	262.3	254.8	7.50	34.972			
2,000.0	1,950.3	1,926.3	1,926.3	8.0	3.4	-162.21	90.7	139.2	288.7	280.9	7.77	37.169			
2,100.0	2,046.4	2,022.4	2,022.4	8.5	3.5	-163.75	90.7	139.2	315.4	307.4	8.04	39.209			
2,200.0	2,142.4	2,118.4	2,118.4	9.0	3.7	-165.05	90.7	139.2	342.3	333.9	8.33	41.103			
2,300.0	2,238.5	2,214.5	2,214.5	9.5	3.9	-166.16	90.7	139.2	369.3	360.7	8.62	42.858			
2,400.0	2,334.5	2,310.5	2,310.5	10.1	4.0	-167.12	90.7	139.2	396.4	387.5	8.91	44.488			
2,500.0	2,430.6	2,406.6	2,406.6	10.6	4.2	-167.96	90.7	139.2	423.6	414.4	9.21	46.001			
2,600.0	2,526.6	2,502.6	2,502.6	11.1	4.4	-168.69	90.7	139.2	450.9	441.4	9.51	47.408			
2,700.0	2,622.7	2,598.7	2,598.7	11.6	4.5	-169.35	90.7	139.2	478.2	468.4	9.82	48.719			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	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 (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	110.72	-69.6	183.9	197.4					
100.0	100.0	83.2	83.2	0.1	0.1	110.79	-69.7	183.7	196.5	196.2	0.25	784.646		
200.0	200.0	182.5	182.5	0.3	0.3	110.97	-70.3	183.3	196.3	195.7	0.60	328.080		
300.0	300.0	283.4	283.4	0.5	0.5	21.54	-71.3	182.6	194.4	193.5	0.95	204.365		
400.0	399.8	387.2	387.1	0.7	0.7	22.65	-72.2	180.8	188.3	187.0	1.31	143.639		
500.0	499.5	493.5	493.3	0.9	0.9	24.41	-71.7	175.7	175.7	174.1	1.68	104.543		
600.0	598.7	596.3	595.7	1.2	1.1	27.56	-70.8	166.9	156.7	154.6	2.07	75.752		
700.0	697.5	694.5	693.2	1.5	1.3	33.65	-71.7	155.2	133.3	130.8	2.52	52.918		
800.0	795.6	787.8	785.4	1.9	1.6	45.10	-75.9	141.5	109.8	106.6	3.15	34.875		
900.0	893.1	879.5	875.7	2.3	1.9	63.93	-82.7	126.9	92.7	88.6	4.07	22.791		
958.4	949.6	932.0	927.2	2.6	2.1	78.11	-87.3	117.5	89.2	84.6	4.66	19.142 CC, ES		
1,000.0	989.6	968.8	963.1	2.8	2.3	88.69	-90.7	110.6	91.2	86.1	5.02	18.176 SF		
1,100.0	1,085.7	1,056.2	1,048.2	3.3	2.6	104.88	-99.4	92.9	109.8	104.4	5.48	20.050		
1,200.0	1,181.9	1,143.5	1,133.2	3.8	3.0	113.61	-108.4	74.6	140.2	134.6	5.66	24.796		
1,300.0	1,277.9	1,230.7	1,217.8	4.3	3.4	121.27	-118.3	56.2	176.6	170.8	5.80	30.448		
1,400.0	1,374.0	1,318.5	1,302.9	4.8	3.8	128.22	-129.3	37.7	217.2	211.2	6.00	36.198		
1,500.0	1,470.0	1,407.1	1,388.8	5.3	4.2	132.99	-140.9	19.2	259.9	253.7	6.27	41.478		
1,600.0	1,566.1	1,497.2	1,476.1	5.9	4.6	136.44	-152.8	0.6	303.5	296.9	6.58	46.102		
1,700.0	1,662.1	1,588.5	1,564.9	6.4	5.0	139.12	-164.3	-17.8	347.2	340.2	6.93	50.073		
1,800.0	1,758.2	1,676.8	1,650.7	6.9	5.4	141.40	-173.8	-35.7	390.9	383.6	7.29	53.624		
1,900.0	1,854.3	1,763.4	1,734.9	7.4	5.7	143.25	-182.9	-53.9	435.6	427.9	7.66	56.868		
2,000.0	1,950.3	1,854.1	1,823.1	8.0	6.1	144.79	-192.7	-73.0	480.7	472.7	8.05	59.724		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 31-9 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 515-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
11,900.0	7,529.0	7,436.4	7,324.6	77.2	17.2	-61.65	4,140.5	1,446.6	431.4	355.7	75.75	5.696		
12,000.0	7,529.0	7,470.3	7,356.6	78.7	17.4	-67.65	4,148.4	1,438.5	368.2	287.4	80.86	4.554		
12,100.0	7,529.0	7,499.2	7,384.1	80.3	17.5	-72.93	4,154.5	1,432.1	321.9	236.8	85.04	3.785		
12,200.0	7,529.0	7,523.9	7,407.7	81.9	17.6	-77.53	4,159.3	1,426.8	300.8	212.3	88.45	3.401		
12,218.9	7,529.0	7,528.1	7,411.8	82.1	17.6	-78.33	4,160.0	1,425.9	300.2	211.2	89.02	3.372 CC, ES, SF		
12,300.0	7,529.0	7,544.9	7,427.9	83.4	17.7	-81.48	4,163.0	1,422.5	310.5	219.3	91.25	3.403		
12,400.0	7,529.0	7,562.8	7,445.2	85.0	17.8	-84.82	4,166.0	1,419.0	348.9	255.3	93.61	3.727		
12,500.0	7,529.0	7,579.3	7,461.2	86.6	17.9	-87.86	4,168.6	1,415.8	407.9	312.2	95.68	4.263		
12,600.0	7,529.0	7,595.5	7,476.9	88.2	17.9	-90.82	4,171.1	1,412.7	480.2	382.7	97.51	4.924		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 32-9 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8100-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			
10,400.0	7,529.0	7,473.0	7,473.0	55.5	13.0	-90.00	2,671.7	1,510.8	427.6	370.7	56.98	7.505		
10,500.0	7,529.0	7,473.0	7,473.0	56.8	13.0	-90.00	2,671.7	1,510.8	356.7	298.0	58.65	6.082		
10,600.0	7,529.0	7,473.0	7,473.0	58.1	13.0	-90.00	2,671.7	1,510.8	302.6	242.3	60.32	5.016		
10,700.0	7,529.0	7,473.0	7,473.0	59.5	13.0	-90.00	2,671.7	1,510.8	275.5	213.5	62.00	4.444		
10,728.3	7,529.0	7,473.0	7,473.0	59.9	13.0	-90.00	2,671.7	1,510.8	274.1	211.6	62.48	4.387 CC, ES, SF		
10,800.0	7,529.0	7,473.0	7,473.0	60.9	13.0	-90.00	2,671.7	1,510.8	283.3	219.6	63.69	4.448		
10,900.0	7,529.0	7,473.0	7,473.0	62.3	13.0	-90.00	2,671.7	1,510.8	323.4	258.1	65.38	4.947		
11,000.0	7,529.0	7,473.0	7,473.0	63.7	13.0	-90.00	2,671.7	1,510.8	385.9	318.9	67.07	5.754		
11,100.0	7,529.0	7,473.0	7,473.0	65.2	13.0	-90.00	2,671.7	1,510.8	461.8	393.1	68.77	6.716		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 33-9 (EXISTING) - ENCANA WELL - NO SURVEYS												Offset Site Error:	0.0 ft
Survey Program: 8150-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
9,400.0	7,529.0	7,483.0	7,483.0	44.0	13.1	-90.00	1,647.0	1,498.6	450.1	409.2	40.91	11.003	
9,500.0	7,529.0	7,483.0	7,483.0	44.9	13.1	-90.00	1,647.0	1,498.6	389.4	346.9	42.44	9.174	
9,600.0	7,529.0	7,483.0	7,483.0	46.0	13.1	-90.00	1,647.0	1,498.6	347.3	303.3	44.00	7.892	
9,700.0	7,529.0	7,483.0	7,483.0	47.0	13.1	-90.00	1,647.0	1,498.6	331.0	285.5	45.58	7.263	
9,705.1	7,529.0	7,483.0	7,483.0	47.1	13.1	-90.00	1,647.0	1,498.6	331.0	285.3	45.66	7.250 CC, ES, SF	
9,800.0	7,529.0	7,483.0	7,483.0	48.1	13.1	-90.00	1,647.0	1,498.6	344.3	297.2	47.17	7.300	
9,900.0	7,529.0	7,483.0	7,483.0	49.3	13.1	-90.00	1,647.0	1,498.6	384.1	335.4	48.78	7.875	
10,000.0	7,529.0	7,483.0	7,483.0	50.4	13.1	-90.00	1,647.0	1,498.6	443.3	392.9	50.40	8.796	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design												S9-T2N-R67W (Sprague) - SPRAGUE 34-9 (EXISTING) - ENCANA WELL - NO SURVEYS		Offset Site Error:		0.0 ft	
Survey Program:												8127-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	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning					
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)							
7,900.0	7,484.2	7,453.2	7,453.2	37.0	13.0	79.62	43.8	2,346.8	485.9	459.0	26.90	18.065					
8,000.0	7,514.3	7,483.3	7,483.3	37.1	13.1	87.36	43.8	2,346.8	455.2	428.3	26.93	16.906					
8,077.6	7,526.5	7,495.5	7,495.5	37.1	13.1	90.00	43.8	2,346.8	447.4	420.3	27.06	16.531	CC, ES, SF				
8,100.0	7,528.1	7,497.1	7,497.1	37.1	13.1	90.19	43.8	2,346.8	448.0	420.9	27.07	16.549					
8,200.0	7,529.0	7,498.0	7,498.0	37.2	13.1	90.00	43.8	2,346.8	466.1	438.7	27.36	17.037					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3A-9H-N267 - Hz - Plan #1													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	-87.66	3.7	-89.5	89.5					
100.0	100.0	100.0	100.0	0.1	0.1	-87.66	3.7	-89.5	89.5	89.3	0.24	366.408		
200.0	200.0	200.0	200.0	0.3	0.3	-87.66	3.7	-89.5	89.5	88.9	0.59	150.874	CC, ES	
300.0	300.0	297.1	297.0	0.5	0.5	-178.08	3.1	-91.0	92.9	91.9	0.94	99.041		
400.0	399.8	393.5	393.3	0.7	0.7	-179.16	1.5	-95.6	102.8	101.5	1.28	80.259		
500.0	499.5	488.6	488.1	0.9	0.9	179.44	-1.1	-103.2	119.4	117.8	1.62	73.588		
600.0	598.7	581.7	580.6	1.2	1.1	178.03	-4.7	-113.4	142.5	140.6	1.96	72.715	SF	
700.0	697.5	672.4	670.3	1.5	1.4	176.76	-9.2	-126.1	172.1	169.8	2.29	75.066		
800.0	795.6	760.2	756.6	1.9	1.7	175.70	-14.4	-141.0	207.8	205.2	2.62	79.387		
900.0	893.1	844.5	839.1	2.3	2.0	174.81	-20.2	-157.6	249.4	246.5	2.93	85.019		
1,000.0	989.6	931.0	923.3	2.8	2.4	174.08	-26.7	-176.4	296.1	292.9	3.25	91.056		
1,100.0	1,085.7	1,018.6	1,008.5	3.3	2.8	166.52	-33.4	-195.4	344.3	340.7	3.60	95.551		
1,200.0	1,181.9	1,106.6	1,094.2	3.8	3.2	158.96	-40.1	-214.6	391.7	387.7	3.98	98.383		
1,300.0	1,277.9	1,194.9	1,180.0	4.3	3.6	156.51	-46.8	-233.8	438.5	434.1	4.37	100.367		
1,400.0	1,374.0	1,283.2	1,266.0	4.8	3.9	157.16	-53.6	-253.0	485.2	480.5	4.76	102.023		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3B-9H-N267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-87.34	3.6	-78.3	78.4					
100.0	100.0	100.0	100.0	0.1	0.1	-87.34	3.6	-78.3	78.4	78.1	0.24	320.687		
200.0	200.0	200.0	200.0	0.3	0.3	-87.34	3.6	-78.3	78.4	77.8	0.59	132.048	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-177.39	3.6	-78.3	80.1	79.2	0.94	85.024		
400.0	399.8	397.2	397.2	0.7	0.6	-178.02	3.0	-79.8	86.9	85.6	1.29	67.563		
500.0	499.5	493.4	493.3	0.9	0.8	-179.41	1.0	-84.3	100.1	98.5	1.63	61.530		
600.0	598.7	588.1	587.6	1.2	1.0	178.93	-2.2	-91.5	119.9	118.0	1.97	60.971	SF	
700.0	697.5	680.5	679.4	1.5	1.3	177.33	-6.5	-101.4	146.2	143.9	2.30	63.462		
800.0	795.6	770.2	768.1	1.9	1.5	175.94	-11.8	-113.5	178.7	176.0	2.63	67.812		
900.0	893.1	859.2	855.7	2.3	1.8	174.76	-18.1	-127.9	217.0	214.0	2.96	73.240		
1,000.0	989.6	949.9	944.9	2.8	2.1	173.90	-24.8	-142.9	259.0	255.7	3.29	78.681		
1,100.0	1,085.7	1,040.0	1,033.5	3.3	2.4	166.43	-31.3	-157.9	302.5	298.9	3.65	82.813		
1,200.0	1,181.9	1,130.3	1,122.3	3.8	2.8	159.03	-37.9	-172.9	345.2	341.2	4.04	85.469		
1,300.0	1,277.9	1,220.9	1,211.4	4.3	3.1	156.70	-44.5	-188.0	387.3	382.8	4.43	87.389		
1,400.0	1,374.0	1,311.6	1,300.6	4.8	3.4	157.40	-51.1	-203.0	429.3	424.5	4.82	89.010		
1,500.0	1,470.0	1,402.2	1,389.7	5.3	3.7	157.97	-57.7	-218.1	471.4	466.2	5.22	90.339		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3C-9H-N267 - Hz - Plan #1													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	-87.02	3.6	-69.9	70.0					
100.0	100.0	100.0	100.0	0.1	0.1	-87.02	3.6	-69.9	70.0	69.7	0.24	286.405		
200.0	200.0	200.0	200.0	0.3	0.3	-87.02	3.6	-69.9	70.0	69.4	0.59	117.931	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-177.09	3.6	-69.9	71.7	70.8	0.94	76.132		
400.0	399.8	399.8	399.8	0.7	0.6	-177.29	3.6	-69.9	77.0	75.7	1.29	59.668		
500.0	499.5	498.2	498.2	0.9	0.8	-177.87	3.2	-70.6	86.4	84.7	1.63	52.872		
600.0	598.7	595.9	595.8	1.2	1.0	-178.93	1.8	-72.7	100.7	98.7	1.97	50.981	SF	
700.0	697.5	692.4	692.3	1.5	1.2	179.83	-0.4	-76.2	119.8	117.5	2.31	51.825		
800.0	795.6	787.6	787.3	1.9	1.4	178.61	-3.4	-81.0	143.8	141.2	2.65	54.354		
900.0	893.1	881.1	880.5	2.3	1.5	177.50	-7.2	-86.9	172.6	169.7	2.98	57.990		
1,000.0	989.6	972.6	971.6	2.8	1.7	176.53	-11.7	-94.0	206.1	202.8	3.30	62.386		
1,100.0	1,085.7	1,062.6	1,061.1	3.3	2.0	168.96	-16.8	-102.2	242.5	238.9	3.66	66.283		
1,200.0	1,181.9	1,152.0	1,149.8	3.8	2.2	161.46	-22.7	-111.5	279.5	275.5	4.03	69.284		
1,300.0	1,277.9	1,240.5	1,237.5	4.3	2.4	158.94	-29.3	-121.9	317.2	312.8	4.42	71.833		
1,400.0	1,374.0	1,331.3	1,327.3	4.8	2.7	159.36	-36.6	-133.4	355.8	351.0	4.80	74.051		
1,500.0	1,470.0	1,423.5	1,418.4	5.3	3.0	159.71	-44.0	-145.2	394.4	389.2	5.20	75.838		
1,600.0	1,566.1	1,515.8	1,509.6	5.9	3.2	159.99	-51.5	-157.0	433.1	427.5	5.60	77.314		
1,700.0	1,662.1	1,608.0	1,600.7	6.4	3.5	160.22	-58.9	-168.7	471.8	465.8	6.01	78.549		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3D-9H-N267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-86.47	3.6	-58.7	58.8					
100.0	100.0	100.0	100.0	0.1	0.1	-86.47	3.6	-58.7	58.8	58.6	0.24	240.713		
200.0	200.0	200.0	200.0	0.3	0.3	-86.47	3.6	-58.7	58.8	58.2	0.59	99.117 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-176.57	3.6	-58.7	60.6	59.6	0.94	64.280		
400.0	399.8	399.8	399.8	0.7	0.6	-176.83	3.6	-58.7	65.8	64.5	1.29	51.007		
500.0	499.5	499.5	499.5	0.9	0.8	-177.19	3.6	-58.7	74.5	72.9	1.64	45.545		
600.0	598.7	597.4	597.4	1.2	1.0	-177.87	3.2	-59.4	87.4	85.4	1.98	44.205 SF		
700.0	697.5	694.4	694.4	1.5	1.2	-178.90	2.0	-61.6	105.1	102.8	2.31	45.449		
800.0	795.6	790.1	790.0	1.9	1.3	179.98	0.0	-65.1	127.8	125.1	2.65	48.293		
900.0	893.1	884.2	883.9	2.3	1.5	178.91	-2.8	-69.9	155.2	152.3	2.97	52.198		
1,000.0	989.6	976.4	975.9	2.8	1.7	177.96	-6.3	-75.9	187.4	184.1	3.30	56.843		
1,100.0	1,085.7	1,067.2	1,066.2	3.3	1.9	170.44	-10.4	-83.0	222.6	219.0	3.64	61.081		
1,200.0	1,181.9	1,157.2	1,155.7	3.8	2.1	163.03	-15.2	-91.3	258.5	254.5	4.01	64.493		
1,300.0	1,277.9	1,246.4	1,244.3	4.3	2.3	160.61	-20.6	-100.7	295.1	290.7	4.38	67.445		
1,400.0	1,374.0	1,336.4	1,333.5	4.8	2.6	161.07	-26.8	-111.4	332.9	328.1	4.75	70.113		
1,500.0	1,470.0	1,428.9	1,425.0	5.3	2.8	161.42	-33.2	-122.5	370.9	365.8	5.13	72.305		
1,600.0	1,566.1	1,521.3	1,516.6	5.9	3.1	161.71	-39.7	-133.7	408.9	403.4	5.52	74.140		
1,700.0	1,662.1	1,613.8	1,608.2	6.4	3.3	161.95	-46.1	-144.8	447.0	441.1	5.90	75.694		
1,800.0	1,758.2	1,706.3	1,699.7	6.9	3.6	162.16	-52.5	-156.0	485.0	478.7	6.30	77.024		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3E-9H-N267 - Hz - Plan #1													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	-85.89	3.6	-50.3	50.4					
100.0	100.0	100.0	100.0	0.1	0.1	-85.89	3.6	-50.3	50.4	50.2	0.24	206.465		
200.0	200.0	200.0	200.0	0.3	0.3	-85.89	3.6	-50.3	50.4	49.9	0.59	85.015	CC, ES	
300.0	300.0	299.7	299.7	0.5	0.5	-176.92	2.8	-50.6	52.5	51.5	0.94	55.675		
400.0	399.8	399.1	399.1	0.7	0.7	-179.59	0.4	-51.6	58.6	57.3	1.29	45.313		
500.0	499.5	498.0	497.9	0.9	0.8	177.03	-3.5	-53.3	69.1	67.4	1.65	41.895		
600.0	598.7	596.2	595.9	1.2	1.0	173.72	-9.0	-55.5	84.0	81.9	2.01	41.780	SF	
700.0	697.5	693.4	692.8	1.5	1.2	170.87	-16.0	-58.4	103.3	100.9	2.38	43.428		
800.0	795.6	789.4	788.4	1.9	1.5	168.54	-24.4	-61.9	127.0	124.3	2.76	46.052		
900.0	893.1	884.0	882.4	2.3	1.7	166.68	-34.1	-65.9	155.1	152.0	3.15	49.205		
1,000.0	989.6	976.9	974.5	2.8	2.0	165.19	-45.0	-70.4	187.5	183.9	3.56	52.613		
1,100.0	1,085.7	1,068.7	1,065.4	3.3	2.2	157.40	-57.1	-75.4	222.0	218.0	4.04	55.021		
1,200.0	1,181.9	1,160.4	1,155.9	3.8	2.5	149.69	-70.6	-80.9	256.2	251.6	4.56	56.228		
1,300.0	1,277.9	1,251.9	1,246.0	4.3	2.8	146.87	-85.4	-87.0	290.1	285.0	5.09	56.960		
1,400.0	1,374.0	1,345.8	1,338.4	4.8	3.1	146.99	-101.2	-93.6	324.4	318.7	5.64	57.463		
1,500.0	1,470.0	1,439.8	1,430.7	5.3	3.5	147.09	-117.0	-100.1	358.6	352.4	6.20	57.805		
1,600.0	1,566.1	1,533.7	1,523.1	5.9	3.8	147.17	-132.9	-106.6	392.9	386.1	6.77	58.037		
1,700.0	1,662.1	1,627.7	1,615.5	6.4	4.1	147.24	-148.7	-113.2	427.1	419.8	7.34	58.195		
1,800.0	1,758.2	1,721.6	1,707.9	6.9	4.5	147.30	-164.5	-119.7	461.4	453.5	7.91	58.303		
1,900.0	1,854.3	1,815.6	1,800.2	7.4	4.8	147.35	-180.3	-126.2	495.6	487.1	8.49	58.376		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3F-9H-N267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-84.73	3.6	-39.1	39.3					
100.0	100.0	100.0	100.0	0.1	0.1	-84.73	3.6	-39.1	39.3	39.1	0.24	160.850		
200.0	200.0	200.0	200.0	0.3	0.3	-84.73	3.6	-39.1	39.3	38.7	0.59	66.232 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-174.95	3.6	-39.1	41.0	40.1	0.94	43.562		
400.0	399.8	399.8	399.8	0.7	0.6	-175.51	3.6	-39.1	46.3	45.0	1.29	35.864		
500.0	499.5	499.5	499.5	0.9	0.8	-176.21	3.6	-39.1	54.9	53.3	1.64	33.595 SF		
600.0	598.7	599.2	599.2	1.2	1.0	-177.57	2.8	-38.8	66.8	64.8	1.98	33.726		
700.0	697.5	698.5	698.5	1.5	1.2	-179.72	0.4	-37.9	81.5	79.1	2.32	35.060		
800.0	795.6	797.4	797.3	1.9	1.4	177.87	-3.6	-36.4	99.1	96.4	2.67	37.125		
900.0	893.1	895.7	895.4	2.3	1.5	175.50	-9.2	-34.3	119.8	116.8	3.02	39.618		
1,000.0	989.6	993.3	992.7	2.8	1.7	173.28	-16.2	-31.6	143.6	140.2	3.39	42.318		
1,100.0	1,085.7	1,090.6	1,089.6	3.3	2.0	164.91	-24.8	-28.4	168.6	164.8	3.82	44.181		
1,200.0	1,181.9	1,188.4	1,186.8	3.8	2.2	156.88	-35.0	-24.5	192.4	188.1	4.29	44.889		
1,300.0	1,277.9	1,286.6	1,284.1	4.3	2.4	153.76	-46.8	-20.1	215.0	210.2	4.78	44.942		
1,400.0	1,374.0	1,384.1	1,380.7	4.8	2.7	153.44	-59.5	-15.3	237.3	232.0	5.30	44.785		
1,500.0	1,470.0	1,481.6	1,477.2	5.3	3.0	153.18	-72.2	-10.5	259.6	253.8	5.83	44.555		
1,600.0	1,566.1	1,579.1	1,573.8	5.9	3.2	152.95	-84.9	-5.7	281.9	275.6	6.37	44.292		
1,700.0	1,662.1	1,676.6	1,670.3	6.4	3.5	152.76	-97.6	-0.9	304.2	297.3	6.91	44.021		
1,800.0	1,758.2	1,774.0	1,766.8	6.9	3.8	152.60	-110.3	3.9	326.5	319.1	7.46	43.753		
1,900.0	1,854.3	1,871.5	1,863.4	7.4	4.1	152.46	-123.0	8.7	348.9	340.8	8.02	43.496		
2,000.0	1,950.3	1,969.0	1,959.9	8.0	4.3	152.33	-135.6	13.5	371.2	362.6	8.58	43.253		
2,100.0	2,046.4	2,066.5	2,056.4	8.5	4.6	152.22	-148.3	18.3	393.5	384.3	9.15	43.024		
2,200.0	2,142.4	2,163.9	2,152.9	9.0	4.9	152.12	-161.0	23.1	415.8	406.1	9.71	42.810		
2,300.0	2,238.5	2,261.4	2,249.5	9.5	5.2	152.03	-173.7	27.9	438.1	427.8	10.28	42.610		
2,400.0	2,334.5	2,358.9	2,346.0	10.1	5.5	151.95	-186.4	32.7	460.4	449.6	10.85	42.424		
2,500.0	2,430.6	2,456.4	2,442.5	10.6	5.8	151.88	-199.1	37.5	482.8	471.3	11.43	42.251		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3G-9H-N267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-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	-82.66	3.6	-28.0	28.2					
100.0	100.0	100.0	100.0	0.1	0.1	-82.66	3.6	-28.0	28.2	27.9	0.24	115.353		
200.0	200.0	200.0	200.0	0.3	0.3	-82.66	3.6	-28.0	28.2	27.6	0.59	47.498 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-173.08	3.6	-28.0	29.9	29.0	0.94	31.754		
400.0	399.8	399.8	399.8	0.7	0.6	-174.10	3.6	-28.0	35.1	33.8	1.29	27.226		
500.0	499.5	500.0	500.0	0.9	0.8	-176.00	3.0	-27.3	43.1	41.5	1.64	26.347 SF		
600.0	598.7	600.1	600.1	1.2	1.0	-178.73	1.2	-25.4	53.4	51.4	1.98	26.903		
700.0	697.5	700.0	699.9	1.5	1.2	178.37	-1.9	-22.3	65.9	63.6	2.33	28.271		
800.0	795.6	799.7	799.4	1.9	1.4	175.63	-6.1	-17.9	80.8	78.2	2.69	30.107		
900.0	893.1	899.1	898.5	2.3	1.6	173.16	-11.5	-12.3	98.2	95.2	3.05	32.182		
1,000.0	989.6	998.2	997.1	2.8	1.8	171.00	-18.1	-5.5	118.1	114.7	3.44	34.334		
1,100.0	1,085.7	1,097.4	1,095.6	3.3	2.0	162.89	-25.8	2.5	138.6	134.7	3.89	35.662		
1,200.0	1,181.9	1,197.2	1,194.6	3.8	2.3	155.30	-34.9	11.9	156.9	152.6	4.37	35.916		
1,300.0	1,277.9	1,295.8	1,292.2	4.3	2.6	152.83	-44.4	21.7	173.9	169.0	4.85	35.845		
1,400.0	1,374.0	1,394.3	1,389.8	4.8	2.9	153.28	-53.9	31.6	190.7	185.4	5.33	35.777		
1,500.0	1,470.0	1,492.9	1,487.4	5.3	3.1	153.65	-63.4	41.5	207.5	201.7	5.82	35.690		
1,600.0	1,566.1	1,591.4	1,585.0	5.9	3.4	153.97	-73.0	51.3	224.4	218.1	6.30	35.596		
1,700.0	1,662.1	1,690.0	1,682.6	6.4	3.7	154.24	-82.5	61.2	241.3	234.5	6.80	35.502		
1,800.0	1,758.2	1,788.6	1,780.2	6.9	4.0	154.48	-92.0	71.1	258.1	250.8	7.29	35.411		
1,900.0	1,854.3	1,887.1	1,877.8	7.4	4.3	154.69	-101.6	80.9	275.0	267.2	7.79	35.324		
2,000.0	1,950.3	1,985.7	1,975.4	8.0	4.6	154.88	-111.1	90.8	291.9	283.6	8.28	35.242		
2,100.0	2,046.4	2,084.3	2,073.1	8.5	4.8	155.04	-120.6	100.7	308.8	300.0	8.78	35.165		
2,200.0	2,142.4	2,182.8	2,170.7	9.0	5.1	155.19	-130.1	110.5	325.6	316.4	9.28	35.094		
2,300.0	2,238.5	2,281.4	2,268.3	9.5	5.4	155.32	-139.7	120.4	342.5	332.7	9.78	35.027		
2,400.0	2,334.5	2,379.9	2,365.9	10.1	5.7	155.44	-149.2	130.3	359.4	349.1	10.28	34.965		
2,500.0	2,430.6	2,478.5	2,463.5	10.6	6.0	155.55	-158.7	140.1	376.3	365.5	10.78	34.907		
2,600.0	2,526.6	2,577.1	2,561.1	11.1	6.3	155.65	-168.3	150.0	393.2	381.9	11.28	34.853		
2,700.0	2,622.7	2,675.6	2,658.7	11.6	6.6	155.74	-177.8	159.9	410.0	398.3	11.78	34.802		
2,800.0	2,718.7	2,774.2	2,756.3	12.2	6.9	155.83	-187.3	169.8	426.9	414.6	12.28	34.755		
2,900.0	2,814.8	2,872.7	2,853.9	12.7	7.2	155.91	-196.9	179.6	443.8	431.0	12.79	34.711		
3,000.0	2,910.8	2,971.3	2,951.5	13.2	7.5	155.98	-206.4	189.5	460.7	447.4	13.29	34.669		
3,100.0	3,006.9	3,069.9	3,049.1	13.8	7.8	156.05	-215.9	199.4	477.6	463.8	13.79	34.630		
3,200.0	3,102.9	3,168.4	3,146.7	14.3	8.1	156.11	-225.4	209.2	494.5	480.2	14.29	34.593		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3H-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				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	-79.60	3.6	-19.6	19.9					
100.0	100.0	100.0	100.0	0.1	0.1	-79.60	3.6	-19.6	19.9	19.7	0.24	81.424		
200.0	200.0	200.0	200.0	0.3	0.3	-79.60	3.6	-19.6	19.9	19.3	0.59	33.527 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-170.43	3.6	-19.6	21.6	20.7	0.94	22.940		
400.0	399.8	399.8	399.8	0.7	0.6	-172.27	3.6	-19.6	26.8	25.5	1.29	20.765		
500.0	499.5	500.5	500.5	0.9	0.8	-175.49	2.7	-18.1	33.9	32.2	1.64	20.685 SF		
600.0	598.7	601.3	601.2	1.2	1.0	179.79	-0.2	-13.6	41.5	39.5	1.99	20.882		
700.0	697.5	702.2	701.6	1.5	1.2	174.41	-4.8	-6.1	50.0	47.6	2.35	21.244		
800.0	795.6	803.1	801.8	1.9	1.5	168.90	-11.4	4.4	59.6	56.8	2.76	21.601		
900.0	893.1	903.8	901.2	2.3	1.8	163.56	-19.8	17.9	70.5	67.3	3.24	21.784		
1,000.0	989.6	1,002.8	998.7	2.8	2.1	159.64	-28.9	32.5	84.1	80.4	3.77	22.305		
1,100.0	1,085.7	1,101.6	1,096.0	3.3	2.4	151.43	-38.0	47.0	99.1	94.7	4.36	22.739		
1,200.0	1,181.9	1,200.7	1,193.6	3.8	2.7	144.62	-47.1	61.6	112.4	107.4	4.94	22.744		
1,300.0	1,277.9	1,300.0	1,291.4	4.3	3.1	143.21	-56.3	76.2	124.2	118.8	5.48	22.667		
1,400.0	1,374.0	1,399.2	1,389.1	4.8	3.4	144.53	-65.4	90.9	136.1	130.1	6.01	22.640		
1,500.0	1,470.0	1,498.5	1,486.9	5.3	3.8	145.63	-74.5	105.5	147.9	141.4	6.54	22.634		
1,600.0	1,566.1	1,597.7	1,584.6	5.9	4.1	146.57	-83.7	120.1	159.9	152.8	7.06	22.641		
1,700.0	1,662.1	1,697.0	1,682.3	6.4	4.4	147.38	-92.8	134.7	171.8	164.2	7.58	22.658		
1,800.0	1,758.2	1,796.2	1,780.1	6.9	4.8	148.08	-101.9	149.3	183.8	175.7	8.10	22.681		
1,900.0	1,854.3	1,895.5	1,877.8	7.4	5.1	148.70	-111.1	163.9	195.8	187.2	8.62	22.707		
2,000.0	1,950.3	1,994.8	1,975.6	8.0	5.5	149.24	-120.2	178.6	207.8	198.7	9.14	22.735		
2,100.0	2,046.4	2,094.0	2,073.3	8.5	5.8	149.73	-129.3	193.2	219.9	210.2	9.66	22.764		
2,200.0	2,142.4	2,193.3	2,171.1	9.0	6.2	150.16	-138.5	207.8	231.9	221.8	10.18	22.794		
2,300.0	2,238.5	2,292.5	2,268.8	9.5	6.5	150.56	-147.6	222.4	244.0	233.3	10.69	22.824		
2,400.0	2,334.5	2,391.8	2,366.6	10.1	6.9	150.91	-156.7	237.0	256.1	244.9	11.21	22.853		
2,500.0	2,430.6	2,491.0	2,464.3	10.6	7.2	151.24	-165.9	251.6	268.2	256.5	11.72	22.882		
2,600.0	2,526.6	2,590.3	2,562.1	11.1	7.6	151.53	-175.0	266.3	280.3	268.0	12.23	22.910		
2,700.0	2,622.7	2,689.5	2,659.8	11.6	7.9	151.80	-184.1	280.9	292.4	279.6	12.75	22.937		
2,800.0	2,718.7	2,788.8	2,757.6	12.2	8.3	152.05	-193.3	295.5	304.5	291.2	13.26	22.963		
2,900.0	2,814.8	2,888.1	2,855.3	12.7	8.6	152.28	-202.4	310.1	316.6	302.8	13.77	22.988		
3,000.0	2,910.8	2,987.3	2,953.1	13.2	8.9	152.50	-211.5	324.7	328.7	314.4	14.28	23.013		
3,100.0	3,006.9	3,086.6	3,050.8	13.8	9.3	152.69	-220.7	339.3	340.8	326.1	14.80	23.036		
3,200.0	3,102.9	3,185.8	3,148.6	14.3	9.6	152.88	-229.8	354.0	353.0	337.7	15.31	23.059		
3,300.0	3,199.0	3,285.1	3,246.3	14.8	10.0	153.05	-238.9	368.6	365.1	349.3	15.82	23.080		
3,400.0	3,295.1	3,384.3	3,344.1	15.4	10.3	153.21	-248.1	383.2	377.2	360.9	16.33	23.101		
3,500.0	3,391.1	3,483.6	3,441.8	15.9	10.7	153.36	-257.2	397.8	389.4	372.5	16.84	23.121		
3,600.0	3,487.2	3,582.8	3,539.6	16.4	11.0	153.51	-266.3	412.4	401.5	384.2	17.35	23.141		
3,700.0	3,583.2	3,682.1	3,637.3	16.9	11.4	153.64	-275.5	427.0	413.7	395.8	17.86	23.159		
3,800.0	3,679.3	3,781.4	3,735.1	17.5	11.7	153.77	-284.6	441.7	425.8	407.4	18.37	23.177		
3,900.0	3,775.3	3,880.6	3,832.8	18.0	12.1	153.89	-293.7	456.3	438.0	419.1	18.88	23.194		
4,000.0	3,871.4	3,979.9	3,930.5	18.5	12.4	154.00	-302.9	470.9	450.1	430.7	19.39	23.211		
4,100.0	3,967.4	4,079.1	4,028.3	19.1	12.8	154.10	-312.0	485.5	462.3	442.3	19.90	23.227		
4,200.0	4,063.5	4,178.4	4,126.0	19.6	13.1	154.21	-321.1	500.1	474.4	454.0	20.41	23.242		
4,300.0	4,159.5	4,277.6	4,223.8	20.1	13.5	154.30	-330.3	514.7	486.6	465.6	20.92	23.257		
4,400.0	4,255.6	4,376.9	4,321.5	20.7	13.8	154.39	-339.4	529.4	498.7	477.3	21.43	23.271		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3I-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		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.97	0.0	-8.4	8.4					
100.0	100.0	100.0	100.0	0.1	0.1	-89.97	0.0	-8.4	8.4	8.1	0.24	34.322		
200.0	200.0	200.0	200.0	0.3	0.3	-89.97	0.0	-8.4	8.4	7.8	0.59	14.133 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-179.98	0.0	-8.4	10.1	9.2	0.94	10.754		
400.0	399.8	400.3	400.3	0.7	0.6	177.21	-0.7	-6.8	13.8	12.5	1.29	10.664 SF		
500.0	499.5	500.7	500.5	0.9	0.8	171.29	-2.7	-1.9	17.8	16.2	1.65	10.837		
600.0	598.7	601.1	600.6	1.2	1.1	164.37	-6.1	6.2	22.6	20.6	2.02	11.157		
700.0	697.5	701.6	700.3	1.5	1.3	157.49	-10.8	17.6	28.3	25.8	2.46	11.486		
800.0	795.6	802.0	799.5	1.9	1.6	151.15	-16.9	32.1	35.1	32.1	2.99	11.709		
900.0	893.1	902.3	897.9	2.3	2.0	145.64	-24.2	49.8	43.1	39.4	3.64	11.825		
1,000.0	989.6	1,001.7	995.2	2.8	2.4	143.07	-32.0	68.3	53.6	49.2	4.33	12.365		
1,100.0	1,085.7	1,101.1	1,092.6	3.3	2.7	136.90	-39.7	86.9	64.6	59.6	5.01	12.890		
1,200.0	1,181.9	1,200.7	1,190.1	3.8	3.1	132.04	-47.4	105.5	73.3	67.7	5.65	12.979		
1,300.0	1,277.9	1,300.3	1,287.7	4.3	3.5	132.52	-55.2	124.1	80.2	74.0	6.20	12.942		
1,400.0	1,374.0	1,400.0	1,385.3	4.8	3.9	135.44	-62.9	142.7	87.2	80.5	6.72	12.980		
1,500.0	1,470.0	1,499.7	1,482.9	5.3	4.3	137.92	-70.7	161.3	94.4	87.1	7.22	13.070		
1,600.0	1,566.1	1,599.3	1,580.5	5.9	4.7	140.06	-78.4	179.9	101.7	94.0	7.71	13.190		
1,700.0	1,662.1	1,699.0	1,678.1	6.4	5.1	141.90	-86.2	198.5	109.1	100.9	8.19	13.328		
1,800.0	1,758.2	1,798.7	1,775.7	6.9	5.5	143.51	-93.9	217.1	116.7	108.0	8.66	13.475		
1,900.0	1,854.3	1,898.3	1,873.3	7.4	5.9	144.92	-101.7	235.7	124.3	115.2	9.12	13.625		
2,000.0	1,950.3	1,998.0	1,970.9	8.0	6.2	146.17	-109.4	254.4	132.0	122.4	9.58	13.775		
2,100.0	2,046.4	2,097.6	2,068.5	8.5	6.6	147.27	-117.2	273.0	139.7	129.7	10.04	13.923		
2,200.0	2,142.4	2,197.3	2,166.1	9.0	7.0	148.27	-124.9	291.6	147.5	137.0	10.49	14.068		
2,300.0	2,238.5	2,297.0	2,263.7	9.5	7.4	149.16	-132.7	310.2	155.3	144.4	10.93	14.208		
2,400.0	2,334.5	2,396.6	2,361.3	10.1	7.8	149.97	-140.4	328.8	163.2	151.8	11.38	14.343		
2,500.0	2,430.6	2,496.3	2,459.0	10.6	8.2	150.70	-148.2	347.4	171.1	159.3	11.82	14.472		
2,600.0	2,526.6	2,596.0	2,556.6	11.1	8.6	151.37	-155.9	366.0	179.0	166.7	12.26	14.597		
2,700.0	2,622.7	2,695.6	2,654.2	11.6	9.0	151.98	-163.7	384.6	186.9	174.2	12.70	14.716		
2,800.0	2,718.7	2,795.3	2,751.8	12.2	9.4	152.54	-171.4	403.2	194.9	181.8	13.14	14.830		
2,900.0	2,814.8	2,895.0	2,849.4	12.7	9.8	153.06	-179.2	421.8	202.9	189.3	13.58	14.939		
3,000.0	2,910.8	2,994.6	2,947.0	13.2	10.2	153.54	-186.9	440.4	210.9	196.9	14.02	15.043		
3,100.0	3,006.9	3,094.3	3,044.6	13.8	10.6	153.98	-194.7	459.0	218.9	204.4	14.45	15.143		
3,200.0	3,102.9	3,194.0	3,142.2	14.3	11.0	154.40	-202.4	477.6	226.9	212.0	14.89	15.238		
3,300.0	3,199.0	3,293.6	3,239.8	14.8	11.4	154.78	-210.2	496.2	234.9	219.6	15.32	15.330		
3,400.0	3,295.1	3,393.3	3,337.4	15.4	11.8	155.14	-217.9	514.9	243.0	227.2	15.76	15.417		
3,500.0	3,391.1	3,493.0	3,435.0	15.9	12.2	155.47	-225.7	533.5	251.0	234.8	16.19	15.501		
3,600.0	3,487.2	3,592.6	3,532.6	16.4	12.6	155.79	-233.4	552.1	259.1	242.4	16.63	15.581		
3,700.0	3,583.2	3,692.3	3,630.2	16.9	13.0	156.09	-241.2	570.7	267.1	250.1	17.06	15.658		
3,800.0	3,679.3	3,792.0	3,727.8	17.5	13.4	156.36	-248.9	589.3	275.2	257.7	17.49	15.731		
3,900.0	3,775.3	3,891.6	3,825.4	18.0	13.8	156.63	-256.7	607.9	283.3	265.3	17.93	15.802		
4,000.0	3,871.4	3,991.3	3,923.0	18.5	14.2	156.88	-264.4	626.5	291.3	273.0	18.36	15.870		
4,100.0	3,967.4	4,091.0	4,020.6	19.1	14.6	157.11	-272.2	645.1	299.4	280.6	18.79	15.935		
4,200.0	4,063.5	4,190.6	4,118.3	19.6	15.0	157.33	-279.9	663.7	307.5	288.3	19.22	15.998		
4,300.0	4,159.5	4,290.3	4,215.9	20.1	15.4	157.54	-287.7	682.3	315.6	296.0	19.65	16.058		
4,400.0	4,255.6	4,390.0	4,313.5	20.7	15.8	157.74	-295.4	700.9	323.7	303.6	20.09	16.116		
4,500.0	4,351.6	4,489.6	4,411.1	21.2	16.2	157.93	-303.2	719.5	331.8	311.3	20.52	16.172		
4,600.0	4,447.7	4,589.3	4,508.7	21.7	16.6	158.12	-310.9	738.1	339.9	319.0	20.95	16.226		
4,700.0	4,543.8	4,688.9	4,606.3	22.3	17.0	158.29	-318.7	756.8	348.0	326.6	21.38	16.278		
4,800.0	4,639.8	4,788.6	4,703.9	22.8	17.4	158.45	-326.4	775.4	356.1	334.3	21.81	16.328		
4,900.0	4,735.9	4,888.3	4,801.5	23.3	17.8	158.61	-334.2	794.0	364.2	342.0	22.24	16.377		
5,000.0	4,831.9	4,987.9	4,899.1	23.9	18.1	158.76	-341.9	812.6	372.4	349.7	22.67	16.423		
5,100.0	4,928.0	5,087.6	4,996.7	24.4	18.5	158.91	-349.7	831.2	380.5	357.4	23.10	16.469		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3I-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		
5,200.0	5,024.0	5,187.3	5,094.3	24.9	18.9	159.05	-357.4	849.8	388.6	365.1	23.53	16.512		
5,300.0	5,120.1	5,286.9	5,191.9	25.4	19.3	159.18	-365.2	868.4	396.7	372.8	23.97	16.554		
5,400.0	5,216.1	5,386.6	5,289.5	26.0	19.7	159.31	-372.9	887.0	404.9	380.5	24.40	16.595		
5,500.0	5,312.2	5,486.3	5,387.1	26.5	20.1	159.43	-380.7	905.6	413.0	388.2	24.83	16.635		
5,600.0	5,408.2	5,585.9	5,484.7	27.0	20.5	159.55	-388.4	924.2	421.1	395.9	25.26	16.673		
5,700.0	5,504.3	5,685.6	5,582.3	27.6	20.9	159.66	-396.1	942.8	429.2	403.6	25.69	16.710		
5,800.0	5,600.3	5,785.3	5,679.9	28.1	21.3	159.77	-403.9	961.4	437.4	411.3	26.12	16.746		
5,900.0	5,696.4	5,884.9	5,777.6	28.6	21.7	159.87	-411.6	980.0	445.5	419.0	26.55	16.781		
6,000.0	5,792.5	5,984.6	5,875.2	29.2	22.1	159.98	-419.4	998.6	453.6	426.7	26.98	16.815		
6,100.0	5,888.5	6,084.3	5,972.8	29.7	22.5	160.07	-427.1	1,017.3	461.8	434.4	27.41	16.848		
6,200.0	5,984.6	6,183.9	6,070.4	30.2	22.9	160.17	-434.9	1,035.9	469.9	442.1	27.84	16.880		
6,300.0	6,080.6	6,283.6	6,168.0	30.8	23.3	160.26	-442.6	1,054.5	478.1	449.8	28.27	16.911		
6,400.0	6,176.7	6,383.3	6,265.6	31.3	23.7	160.35	-450.4	1,073.1	486.2	457.5	28.70	16.941		
6,500.0	6,272.7	6,482.9	6,363.2	31.8	24.1	160.43	-458.1	1,091.7	494.3	465.2	29.13	16.971		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	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		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	113.77	-80.1	182.0	199.6					
100.0	100.0	82.6	82.6	0.1	0.1	113.77	-80.1	181.9	198.8	198.6	0.26	776.820		
167.7	167.7	150.1	150.1	0.2	0.2	113.79	-80.2	181.9	198.7	198.3	0.49	409.594		
200.0	200.0	181.7	181.7	0.3	0.3	113.80	-80.2	181.9	198.8	198.2	0.60	333.069		
300.0	300.0	280.5	280.5	0.5	0.5	24.03	-80.6	182.5	197.9	197.0	0.94	209.672		
400.0	399.8	379.7	379.7	0.7	0.6	24.31	-79.9	184.1	194.3	193.0	1.30	149.905		
500.0	499.5	473.3	473.2	0.9	0.8	24.40	-77.9	187.4	188.8	187.1	1.65	114.620		
600.0	598.7	564.5	564.1	1.2	1.0	24.79	-77.4	194.6	184.6	182.6	2.00	92.127		
700.0	697.5	659.4	658.4	1.5	1.3	25.51	-78.0	205.7	181.3	178.9	2.39	75.881		
800.0	795.6	759.5	757.5	1.9	1.5	25.98	-76.9	219.6	176.1	173.3	2.82	62.521		
900.0	893.1	858.5	855.3	2.3	1.8	26.04	-73.1	234.3	167.4	164.1	3.28	51.071		
1,000.0	989.6	958.3	953.6	2.8	2.2	25.58	-66.7	250.8	156.0	152.2	3.78	41.221		
1,100.0	1,085.7	1,058.9	1,051.9	3.3	2.5	16.02	-55.5	268.4	141.6	137.3	4.23	33.471		
1,200.0	1,181.9	1,160.1	1,150.3	3.8	2.9	1.59	-39.6	285.5	125.1	120.6	4.51	27.729		
1,300.0	1,277.9	1,253.4	1,240.3	4.3	3.4	-12.98	-21.2	302.1	111.8	107.0	4.73	23.641		
1,391.2	1,365.6	1,338.7	1,321.5	4.8	3.8	-27.36	-0.8	318.2	107.0	101.8	5.20	20.556 CC		
1,400.0	1,374.0	1,346.6	1,329.0	4.8	3.9	-28.81	1.2	319.8	107.0	101.8	5.27	20.296 ES		
1,500.0	1,470.0	1,437.4	1,414.3	5.3	4.4	-44.99	25.9	338.7	115.2	108.9	6.29	18.317		
1,600.0	1,566.1	1,530.1	1,500.9	5.9	5.0	-59.35	53.1	357.7	133.9	126.3	7.57	17.689 SF		
1,700.0	1,662.1	1,621.9	1,586.4	6.4	5.5	-70.61	81.4	375.1	159.7	150.8	8.87	18.000		
1,800.0	1,758.2	1,711.9	1,670.2	6.9	6.1	-79.03	110.3	391.1	190.7	180.7	10.09	18.911		
1,900.0	1,854.3	1,802.2	1,753.9	7.4	6.6	-85.32	140.2	406.9	225.6	214.4	11.21	20.123		
2,000.0	1,950.3	1,895.4	1,840.4	8.0	7.2	-90.11	170.8	423.2	262.1	249.8	12.28	21.352		
2,100.0	2,046.4	1,989.6	1,928.2	8.5	7.8	-93.77	200.8	439.4	298.8	285.5	13.29	22.480		
2,200.0	2,142.4	2,082.3	2,014.8	9.0	8.4	-96.51	229.8	455.8	335.8	321.5	14.27	23.533		
2,300.0	2,238.5	2,180.0	2,106.0	9.5	9.0	-98.71	259.7	473.6	372.7	357.5	15.24	24.449		
2,400.0	2,334.5	2,274.8	2,195.0	10.1	9.6	-100.44	287.3	491.0	408.6	392.4	16.19	25.244		
2,500.0	2,430.6	2,374.5	2,288.8	10.6	10.2	-101.99	315.7	509.0	444.1	426.9	17.14	25.901		
2,600.0	2,526.6	2,469.6	2,378.6	11.1	10.8	-103.18	341.8	526.7	478.7	460.7	18.08	26.479		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	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	101.39	-37.5	186.2	190.7					
100.0	100.0	82.5	82.5	0.1	0.1	101.42	-37.6	186.2	189.9	189.7	0.25	762.772		
200.0	200.0	182.6	182.6	0.3	0.3	101.57	-38.1	186.0	189.8	189.2	0.60	317.277		
300.0	300.0	282.8	282.8	0.5	0.5	12.00	-39.1	185.6	188.0	187.0	0.95	198.007		
400.0	399.8	382.8	382.7	0.7	0.7	12.88	-40.6	185.0	182.6	181.3	1.30	140.399		
500.0	499.5	482.5	482.4	0.9	0.8	14.37	-42.9	184.1	173.8	172.1	1.66	105.001		
600.0	598.7	581.4	581.3	1.2	1.0	16.53	-45.6	183.1	161.8	159.8	2.01	80.378		
700.0	697.5	679.9	679.8	1.5	1.2	19.15	-47.5	182.5	146.8	144.5	2.38	61.713		
800.0	795.6	778.2	778.1	1.9	1.4	22.73	-48.9	182.0	129.0	126.2	2.77	46.568		
900.0	893.1	875.6	875.5	2.3	1.5	28.08	-49.9	181.5	108.5	105.3	3.22	33.693		
1,000.0	989.6	972.2	972.0	2.8	1.7	37.09	-50.7	180.8	86.3	82.5	3.82	22.574		
1,100.0	1,085.7	1,065.5	1,065.3	3.3	1.9	44.44	-53.2	181.3	67.1	62.5	4.62	14.514		
1,200.0	1,181.9	1,160.7	1,160.3	3.8	2.0	55.83	-57.7	184.7	54.9	49.3	5.57	9.858		
1,300.0	1,277.9	1,257.6	1,256.8	4.3	2.2	75.07	-64.3	190.2	50.3	43.9	6.48	7.770		
1,302.6	1,280.5	1,260.1	1,259.4	4.3	2.2	75.65	-64.5	190.4	50.3	43.8	6.50	7.745 CC, ES		
1,400.0	1,374.0	1,355.6	1,354.2	4.8	2.5	94.50	-71.5	198.9	53.3	46.2	7.11	7.497 SF		
1,500.0	1,470.0	1,454.1	1,451.5	5.3	2.7	106.81	-81.5	210.4	62.2	54.6	7.61	8.172		
1,600.0	1,566.1	1,555.4	1,550.6	5.9	3.0	111.74	-93.8	227.5	71.3	63.1	8.27	8.626		
1,700.0	1,662.1	1,656.9	1,649.2	6.4	3.4	113.65	-105.3	248.6	77.6	68.6	9.04	8.592		
1,800.0	1,758.2	1,756.2	1,745.9	6.9	3.7	116.15	-115.2	268.9	83.3	73.5	9.75	8.540		
1,900.0	1,854.3	1,855.5	1,842.7	7.4	4.1	118.48	-125.4	288.5	89.7	79.3	10.46	8.580		
2,000.0	1,950.3	1,954.7	1,939.6	8.0	4.5	121.05	-135.2	307.2	96.7	85.6	11.10	8.716		
2,100.0	2,046.4	2,053.8	2,036.7	8.5	4.8	123.91	-144.5	324.6	104.7	93.0	11.68	8.962		
2,200.0	2,142.4	2,152.6	2,133.5	9.0	5.2	126.19	-154.3	341.8	113.1	100.9	12.26	9.228		
2,300.0	2,238.5	2,250.6	2,229.7	9.5	5.5	128.39	-164.2	357.8	122.9	110.1	12.81	9.589		
2,400.0	2,334.5	2,349.5	2,326.7	10.1	5.9	129.84	-175.4	373.7	133.6	120.2	13.42	9.950		
2,500.0	2,430.6	2,449.7	2,425.0	10.6	6.3	131.40	-186.1	389.6	144.2	130.2	13.99	10.311		
2,600.0	2,526.6	2,550.4	2,523.9	11.1	6.6	133.07	-195.7	405.9	154.1	139.6	14.51	10.621		
2,700.0	2,622.7	2,649.3	2,621.0	11.6	7.0	134.26	-205.7	422.2	164.1	149.0	15.08	10.881		
2,800.0	2,718.7	2,750.4	2,720.0	12.2	7.4	135.18	-216.1	439.5	173.6	157.9	15.68	11.074		
2,900.0	2,814.8	2,850.3	2,817.8	12.7	7.8	135.98	-226.1	457.3	182.5	166.3	16.28	11.214		
3,000.0	2,910.8	2,949.1	2,914.6	13.2	8.2	136.72	-236.1	474.6	191.7	174.9	16.87	11.369		
3,100.0	3,006.9	3,048.0	3,011.6	13.8	8.5	137.64	-245.5	491.2	201.3	183.9	17.40	11.574		
3,200.0	3,102.9	3,148.5	3,110.3	14.3	8.9	138.64	-254.5	508.0	210.9	193.0	17.89	11.788		
3,300.0	3,199.0	3,246.6	3,206.6	14.8	9.3	139.41	-263.6	524.5	220.5	202.1	18.43	11.967		
3,400.0	3,295.1	3,342.5	3,300.5	15.4	9.7	139.58	-274.9	540.5	231.3	212.2	19.10	12.110		
3,500.0	3,391.1	3,440.2	3,396.2	15.9	10.0	139.64	-287.3	555.7	243.4	223.7	19.79	12.301		
3,600.0	3,487.2	3,540.9	3,494.9	16.4	10.4	139.85	-299.4	571.5	255.2	234.8	20.45	12.478		
3,700.0	3,583.2	3,642.1	3,594.0	16.9	10.8	139.92	-311.9	587.8	266.7	245.6	21.16	12.607		
3,800.0	3,679.3	3,744.2	3,693.9	17.5	11.2	140.06	-323.7	605.1	277.1	255.3	21.83	12.694		
3,900.0	3,775.3	3,839.2	3,787.0	18.0	11.6	140.36	-334.0	620.8	287.7	265.3	22.43	12.825		
4,000.0	3,871.4	3,938.3	3,884.2	18.5	12.0	140.58	-345.4	636.2	299.4	276.3	23.07	12.975		
4,100.0	3,967.4	4,038.2	3,982.1	19.1	12.4	140.66	-357.6	652.0	311.1	287.3	23.76	13.092		
4,200.0	4,063.5	4,146.4	4,087.9	19.6	12.8	140.67	-370.6	670.8	321.3	296.8	24.50	13.113		
4,300.0	4,159.5	4,251.3	4,190.1	20.1	13.3	140.69	-381.9	691.6	328.8	303.5	25.22	13.036		
4,400.0	4,255.6	4,348.7	4,285.2	20.7	13.6	141.02	-390.8	710.4	336.1	310.3	25.78	13.037		
4,500.0	4,351.6	4,444.0	4,378.8	21.2	14.0	141.72	-397.7	727.0	344.5	318.4	26.19	13.155		
4,600.0	4,447.7	4,537.5	4,471.0	21.7	14.3	142.52	-404.1	741.7	354.5	328.0	26.53	13.362		
4,700.0	4,543.8	4,629.9	4,562.3	22.3	14.6	143.53	-409.4	754.1	366.3	339.6	26.76	13.690		
4,800.0	4,639.8	4,723.5	4,655.1	22.8	14.8	144.61	-414.6	765.0	379.9	353.0	26.94	14.103		
4,900.0	4,735.9	4,817.7	4,748.8	23.3	15.0	145.88	-418.5	774.4	394.9	367.9	26.99	14.630		
5,000.0	4,831.9	4,909.0	4,839.8	23.9	15.2	147.44	-419.8	781.5	411.4	384.5	26.88	15.307		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	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							
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	4,928.0	4,998.0	4,928.7	24.4	15.3	149.08	-419.8	786.1	430.3	403.6	26.69	16.120	
5,200.0	5,024.0	5,093.2	5,023.8	24.9	15.5	150.80	-419.2	790.1	450.5	424.0	26.46	17.026	
5,300.0	5,120.1	5,184.4	5,115.0	25.4	15.6	152.23	-419.6	793.2	472.0	445.6	26.33	17.928	
5,400.0	5,216.1	5,277.0	5,207.6	26.0	15.7	153.64	-419.4	795.1	494.8	468.7	26.17	18.905	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design		S9-T2N-R67W (Sprague) - SPRAGUE 6-0-9 (EXISTING) - ENCANA WELL - PLAN ONLY										Offset Site Error:		0.0 ft	
Survey Program:		800-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 +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)					
12,500.0	7,529.0	7,521.6	7,459.0	86.6	20.1	90.00	4,677.5	2,127.0	475.6	379.9	95.64	4.972			
12,600.0	7,529.0	7,521.6	7,459.0	88.2	20.1	90.00	4,677.5	2,127.0	441.7	344.3	97.37	4.536			
12,700.0	7,529.0	7,521.6	7,459.0	89.8	20.1	90.00	4,677.5	2,127.0	429.0	329.9	99.10	4.329			
12,705.3	7,529.0	7,521.6	7,459.0	89.9	20.1	90.00	4,677.5	2,127.0	429.0	329.8	99.19	4.325	CC, ES, SF		
12,800.0	7,529.0	7,521.6	7,459.0	91.4	20.1	90.00	4,677.5	2,127.0	439.3	338.5	100.83	4.357			
12,900.0	7,529.0	7,521.6	7,459.0	93.0	20.1	90.00	4,677.5	2,127.0	471.1	368.5	102.56	4.593			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 6-4-9 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 642-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		
10,000.0	7,529.0	7,595.7	7,487.1	50.4	20.4	92.25	2,180.9	2,242.8	482.4	429.2	53.19	9.069		
10,100.0	7,529.0	7,595.0	7,486.4	51.6	20.4	92.16	2,180.9	2,242.9	448.9	394.0	54.83	8.187		
10,200.0	7,529.0	7,594.3	7,485.7	52.9	20.4	92.07	2,180.9	2,242.9	436.2	379.7	56.48	7.724		
10,206.0	7,529.0	7,594.3	7,485.7	53.0	20.4	92.06	2,180.9	2,242.9	436.2	379.6	56.58	7.710 CC, ES		
10,300.0	7,529.0	7,593.6	7,485.1	54.2	20.4	91.98	2,180.9	2,242.9	446.2	388.1	58.14	7.675 SF		
10,400.0	7,529.0	7,593.0	7,484.4	55.5	20.4	91.89	2,180.9	2,242.9	477.4	417.6	59.80	7.983		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Offset Design													S9-T2N-R67W (Sprague) - SPRAGUE V 9-7 (EXISTING) - NOBLE WELL - NO SURVEYS				Offset Site Error:		0.0 ft	
Survey Program: 7700-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)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning							
10,500.0	7,529.0	7,478.0	7,478.0	56.8	13.1	-90.00	2,775.9	1,509.4	428.8	370.2	58.66	7.311								
10,600.0	7,529.0	7,478.0	7,478.0	58.1	13.1	-90.00	2,775.9	1,509.4	357.0	296.6	60.33	5.917								
10,700.0	7,529.0	7,478.0	7,478.0	59.5	13.1	-90.00	2,775.9	1,509.4	301.6	239.5	62.01	4.863								
10,800.0	7,529.0	7,478.0	7,478.0	60.9	13.1	-90.00	2,775.9	1,509.4	272.9	209.2	63.70	4.284								
10,832.4	7,529.0	7,478.0	7,478.0	61.3	13.1	-90.00	2,775.9	1,509.4	270.9	206.7	64.24	4.217	CC, ES, SF							
10,900.0	7,529.0	7,478.0	7,478.0	62.3	13.1	-90.00	2,775.9	1,509.4	279.2	213.8	65.39	4.270								
11,000.0	7,529.0	7,478.0	7,478.0	63.7	13.1	-90.00	2,775.9	1,509.4	318.6	251.5	67.08	4.749								
11,100.0	7,529.0	7,478.0	7,478.0	65.2	13.1	-90.00	2,775.9	1,509.4	380.8	312.0	68.78	5.537								
11,200.0	7,529.0	7,478.0	7,478.0	66.6	13.1	-90.00	2,775.9	1,509.4	456.6	386.2	70.48	6.479								

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Sprague 3J-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 3J-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 #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5011.0ft (Original Well Elev)

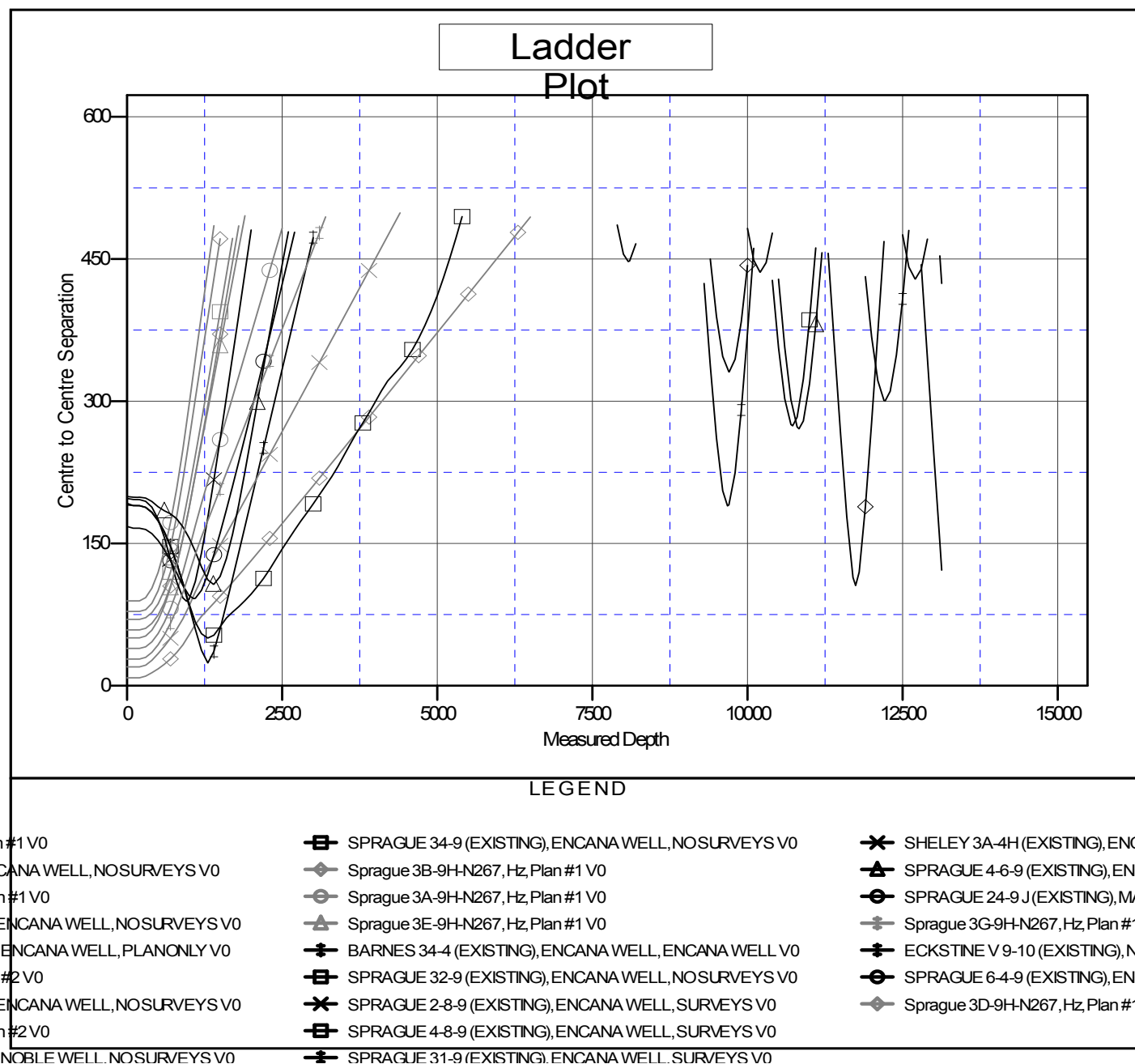
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Sprague 3J-9H-N267

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.39°



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