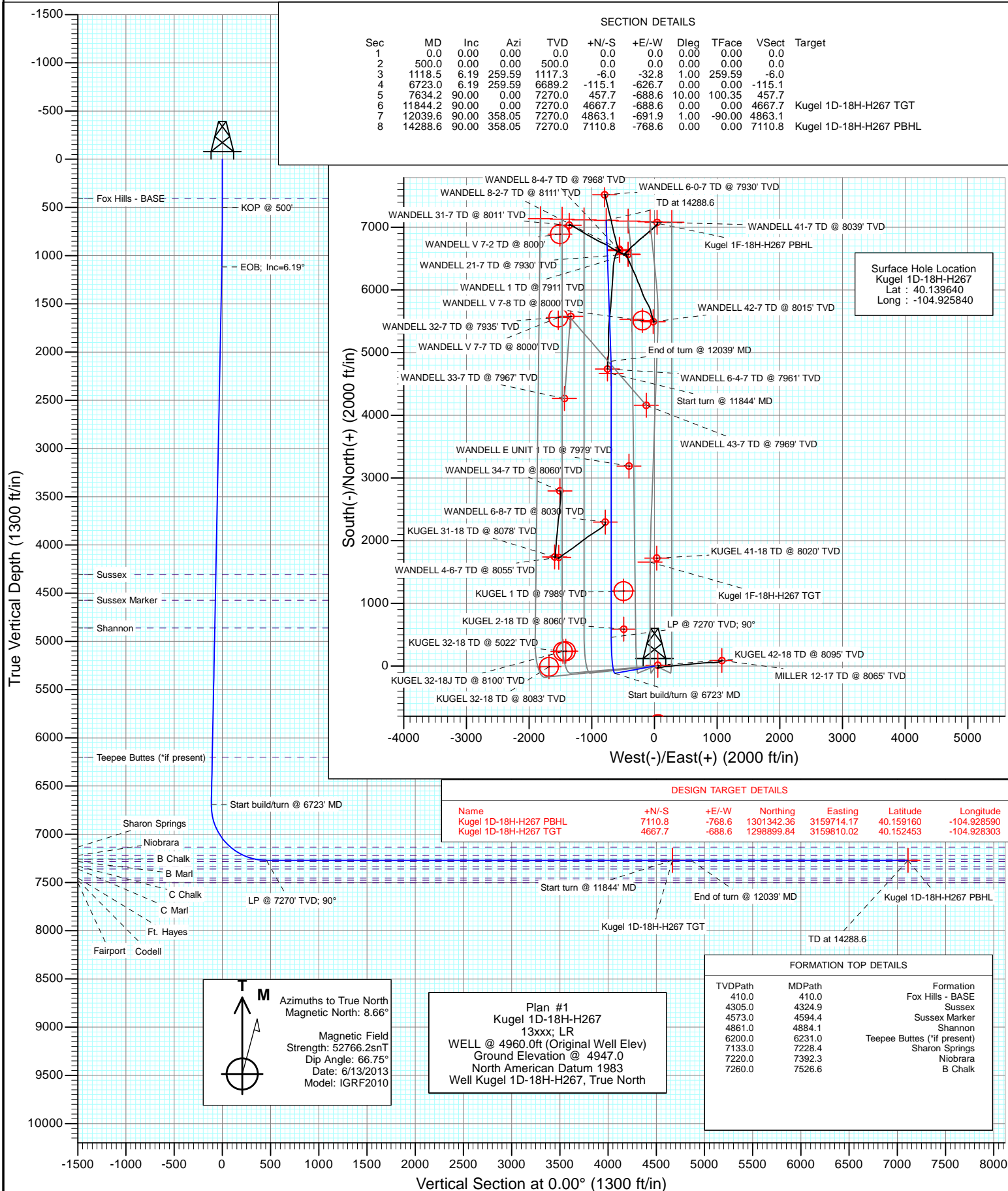




Project: DJ Wattenberg
Site: S18-T2N-R67W
Well: Kugel 1D-18H-H267
Wellbore: HZ
Design: Plan #1



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site:	S18-T2N-R67W	North Reference:	True
Well:	Kugel 1D-18H-H267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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		S18-T2N-R67W			
Site Position:		Northing:	1,294,236.50 ft	Latitude:	40.139640
From:	Lat/Long	Easting:	3,160,498.07 ft	Longitude:	-104.925950
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.37 °

Well	Kugel 1D-18H-H267					
Well Position	+N/-S	0.0 ft	Northing:	1,294,236.67 ft	Latitude:	40.139640
	+E/-W	0.0 ft	Easting:	3,160,528.82 ft	Longitude:	-104.925840
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,947.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/13/2013	8.66	66.75	52,766

Design	Plan #1			
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	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,118.5	6.19	259.59	1,117.3	-6.0	-32.8	1.00	1.00	0.00	259.59	
6,723.0	6.19	259.59	6,689.2	-115.1	-626.7	0.00	0.00	0.00	0.00	
7,634.2	90.00	0.00	7,270.0	457.7	-688.6	10.00	9.20	11.02	100.35	
11,844.2	90.00	0.00	7,270.0	4,667.7	-688.6	0.00	0.00	0.00	0.00	Kugel 1D-18H-H267 1
12,039.6	90.00	358.05	7,270.0	4,863.1	-691.9	1.00	0.00	-1.00	-90.00	
14,288.6	90.00	358.05	7,270.0	7,110.8	-768.6	0.00	0.00	0.00	0.00	Kugel 1D-18H-H267 F

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site:	S18-T2N-R67W	North Reference:	True
Well:	Kugel 1D-18H-H267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
410.0	0.00	0.00	410.0	0.0	0.0	0.0	0.00	0.00	Fox Hills - BASE
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500'
600.0	1.00	259.59	600.0	-0.2	-0.9	-0.2	1.00	1.00	
700.0	2.00	259.59	700.0	-0.6	-3.4	-0.6	1.00	1.00	
800.0	3.00	259.59	799.9	-1.4	-7.7	-1.4	1.00	1.00	
900.0	4.00	259.59	899.7	-2.5	-13.7	-2.5	1.00	1.00	
1,000.0	5.00	259.59	999.4	-3.9	-21.4	-3.9	1.00	1.00	
1,100.0	6.00	259.59	1,098.9	-5.7	-30.9	-5.7	1.00	1.00	
1,118.5	6.19	259.59	1,117.3	-6.0	-32.8	-6.0	1.00	1.00	EOB; Inc=6.19°
1,200.0	6.19	259.59	1,198.3	-7.6	-41.4	-7.6	0.00	0.00	
1,300.0	6.19	259.59	1,297.7	-9.6	-52.0	-9.6	0.00	0.00	
1,400.0	6.19	259.59	1,397.2	-11.5	-62.6	-11.5	0.00	0.00	
1,500.0	6.19	259.59	1,496.6	-13.5	-73.2	-13.5	0.00	0.00	
1,600.0	6.19	259.59	1,596.0	-15.4	-83.8	-15.4	0.00	0.00	
1,700.0	6.19	259.59	1,695.4	-17.3	-94.4	-17.3	0.00	0.00	
1,800.0	6.19	259.59	1,794.8	-19.3	-105.0	-19.3	0.00	0.00	
1,900.0	6.19	259.59	1,894.3	-21.2	-115.6	-21.2	0.00	0.00	
2,000.0	6.19	259.59	1,993.7	-23.2	-126.2	-23.2	0.00	0.00	
2,100.0	6.19	259.59	2,093.1	-25.1	-136.8	-25.1	0.00	0.00	
2,200.0	6.19	259.59	2,192.5	-27.1	-147.4	-27.1	0.00	0.00	
2,300.0	6.19	259.59	2,291.9	-29.0	-158.0	-29.0	0.00	0.00	
2,400.0	6.19	259.59	2,391.3	-31.0	-168.6	-31.0	0.00	0.00	
2,500.0	6.19	259.59	2,490.8	-32.9	-179.2	-32.9	0.00	0.00	
2,600.0	6.19	259.59	2,590.2	-34.9	-189.8	-34.9	0.00	0.00	
2,700.0	6.19	259.59	2,689.6	-36.8	-200.4	-36.8	0.00	0.00	
2,800.0	6.19	259.59	2,789.0	-38.8	-211.0	-38.8	0.00	0.00	
2,900.0	6.19	259.59	2,888.4	-40.7	-221.6	-40.7	0.00	0.00	
3,000.0	6.19	259.59	2,987.8	-42.7	-232.2	-42.7	0.00	0.00	
3,100.0	6.19	259.59	3,087.3	-44.6	-242.8	-44.6	0.00	0.00	
3,200.0	6.19	259.59	3,186.7	-46.5	-253.4	-46.5	0.00	0.00	
3,300.0	6.19	259.59	3,286.1	-48.5	-264.0	-48.5	0.00	0.00	
3,400.0	6.19	259.59	3,385.5	-50.4	-274.6	-50.4	0.00	0.00	
3,500.0	6.19	259.59	3,484.9	-52.4	-285.2	-52.4	0.00	0.00	
3,600.0	6.19	259.59	3,584.4	-54.3	-295.8	-54.3	0.00	0.00	
3,700.0	6.19	259.59	3,683.8	-56.3	-306.4	-56.3	0.00	0.00	
3,800.0	6.19	259.59	3,783.2	-58.2	-317.0	-58.2	0.00	0.00	
3,900.0	6.19	259.59	3,882.6	-60.2	-327.5	-60.2	0.00	0.00	
4,000.0	6.19	259.59	3,982.0	-62.1	-338.1	-62.1	0.00	0.00	
4,100.0	6.19	259.59	4,081.4	-64.1	-348.7	-64.1	0.00	0.00	
4,200.0	6.19	259.59	4,180.9	-66.0	-359.3	-66.0	0.00	0.00	
4,300.0	6.19	259.59	4,280.3	-68.0	-369.9	-68.0	0.00	0.00	
4,324.9	6.19	259.59	4,305.0	-68.4	-372.6	-68.4	0.00	0.00	Sussex
4,400.0	6.19	259.59	4,379.7	-69.9	-380.5	-69.9	0.00	0.00	
4,500.0	6.19	259.59	4,479.1	-71.9	-391.1	-71.9	0.00	0.00	
4,594.4	6.19	259.59	4,573.0	-73.7	-401.1	-73.7	0.00	0.00	Sussex Marker
4,600.0	6.19	259.59	4,578.5	-73.8	-401.7	-73.8	0.00	0.00	
4,700.0	6.19	259.59	4,678.0	-75.7	-412.3	-75.7	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site:	S18-T2N-R67W	North Reference:	True
Well:	Kugel 1D-18H-H267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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	6.19	259.59	4,777.4	-77.7	-422.9	-77.7	0.00	0.00	
4,884.1	6.19	259.59	4,861.0	-79.3	-431.8	-79.3	0.00	0.00	Shannon
4,900.0	6.19	259.59	4,876.8	-79.6	-433.5	-79.6	0.00	0.00	
5,000.0	6.19	259.59	4,976.2	-81.6	-444.1	-81.6	0.00	0.00	
5,100.0	6.19	259.59	5,075.6	-83.5	-454.7	-83.5	0.00	0.00	
5,200.0	6.19	259.59	5,175.0	-85.5	-465.3	-85.5	0.00	0.00	
5,300.0	6.19	259.59	5,274.5	-87.4	-475.9	-87.4	0.00	0.00	
5,400.0	6.19	259.59	5,373.9	-89.4	-486.5	-89.4	0.00	0.00	
5,500.0	6.19	259.59	5,473.3	-91.3	-497.1	-91.3	0.00	0.00	
5,600.0	6.19	259.59	5,572.7	-93.3	-507.7	-93.3	0.00	0.00	
5,700.0	6.19	259.59	5,672.1	-95.2	-518.3	-95.2	0.00	0.00	
5,800.0	6.19	259.59	5,771.5	-97.2	-528.9	-97.2	0.00	0.00	
5,900.0	6.19	259.59	5,871.0	-99.1	-539.5	-99.1	0.00	0.00	
6,000.0	6.19	259.59	5,970.4	-101.1	-550.1	-101.1	0.00	0.00	
6,100.0	6.19	259.59	6,069.8	-103.0	-560.7	-103.0	0.00	0.00	
6,200.0	6.19	259.59	6,169.2	-104.9	-571.3	-104.9	0.00	0.00	
6,231.0	6.19	259.59	6,200.0	-105.6	-574.6	-105.6	0.00	0.00	Teepee Buttes (*if present)
6,300.0	6.19	259.59	6,268.6	-106.9	-581.9	-106.9	0.00	0.00	
6,400.0	6.19	259.59	6,368.1	-108.8	-592.5	-108.8	0.00	0.00	
6,500.0	6.19	259.59	6,467.5	-110.8	-603.1	-110.8	0.00	0.00	
6,600.0	6.19	259.59	6,566.9	-112.7	-613.7	-112.7	0.00	0.00	
6,700.0	6.19	259.59	6,666.3	-114.7	-624.3	-114.7	0.00	0.00	
6,723.0	6.19	259.59	6,689.2	-115.1	-626.7	-115.1	0.00	0.00	Start build/turn @ 6723' MD
6,800.0	8.96	317.44	6,765.6	-111.5	-634.8	-111.5	10.00	3.60	
6,900.0	17.64	340.41	6,862.9	-91.4	-645.2	-91.4	10.00	8.68	
7,000.0	27.22	348.04	6,955.2	-54.7	-655.0	-54.7	10.00	9.59	
7,100.0	37.02	351.87	7,039.8	-2.4	-664.1	-2.4	10.00	9.79	
7,200.0	46.89	354.27	7,114.1	63.9	-672.0	63.9	10.00	9.87	
7,228.4	49.70	354.81	7,133.0	85.0	-674.0	85.0	10.00	9.90	Sharon Springs
7,300.0	56.80	356.00	7,175.8	142.2	-678.6	142.2	10.00	9.91	
7,392.3	65.96	357.28	7,220.0	223.0	-683.3	223.0	10.00	9.93	Niobrara
7,400.0	66.72	357.37	7,223.1	230.0	-683.6	230.0	10.00	9.93	
7,500.0	76.66	358.55	7,254.5	324.8	-686.9	324.8	10.00	9.94	
7,526.6	79.31	358.85	7,260.0	350.8	-687.5	350.8	10.00	9.94	B Chalk
7,600.0	86.60	359.64	7,269.0	423.6	-688.5	423.6	10.00	9.94	
7,634.2	90.00	0.00	7,270.0	457.7	-688.6	457.7	10.00	9.94	LP @ 7270' TVD; 90°
7,700.0	90.00	0.00	7,270.0	523.6	-688.6	523.6	0.00	0.00	
7,800.0	90.00	0.00	7,270.0	623.6	-688.6	623.6	0.00	0.00	
7,900.0	90.00	0.00	7,270.0	723.6	-688.6	723.6	0.00	0.00	
8,000.0	90.00	0.00	7,270.0	823.6	-688.6	823.6	0.00	0.00	
8,100.0	90.00	0.00	7,270.0	923.6	-688.6	923.6	0.00	0.00	
8,200.0	90.00	0.00	7,270.0	1,023.6	-688.6	1,023.6	0.00	0.00	
8,300.0	90.00	0.00	7,270.0	1,123.6	-688.6	1,123.6	0.00	0.00	
8,400.0	90.00	0.00	7,270.0	1,223.6	-688.6	1,223.6	0.00	0.00	
8,500.0	90.00	0.00	7,270.0	1,323.6	-688.6	1,323.6	0.00	0.00	
8,600.0	90.00	0.00	7,270.0	1,423.6	-688.6	1,423.6	0.00	0.00	
8,700.0	90.00	0.00	7,270.0	1,523.6	-688.6	1,523.6	0.00	0.00	
8,800.0	90.00	0.00	7,270.0	1,623.6	-688.6	1,623.6	0.00	0.00	
8,900.0	90.00	0.00	7,270.0	1,723.6	-688.6	1,723.6	0.00	0.00	
9,000.0	90.00	0.00	7,270.0	1,823.6	-688.6	1,823.6	0.00	0.00	
9,100.0	90.00	0.00	7,270.0	1,923.6	-688.6	1,923.6	0.00	0.00	
9,200.0	90.00	0.00	7,270.0	2,023.6	-688.6	2,023.6	0.00	0.00	

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site:	S18-T2N-R67W	North Reference:	True
Well:	Kugel 1D-18H-H267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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
9,300.0	90.00	0.00	7,270.0	2,123.6	-688.6	2,123.6	0.00	0.00	
9,400.0	90.00	0.00	7,270.0	2,223.6	-688.6	2,223.6	0.00	0.00	
9,500.0	90.00	0.00	7,270.0	2,323.6	-688.6	2,323.6	0.00	0.00	
9,600.0	90.00	0.00	7,270.0	2,423.6	-688.6	2,423.6	0.00	0.00	
9,700.0	90.00	0.00	7,270.0	2,523.6	-688.6	2,523.6	0.00	0.00	
9,800.0	90.00	0.00	7,270.0	2,623.6	-688.6	2,623.6	0.00	0.00	
9,900.0	90.00	0.00	7,270.0	2,723.6	-688.6	2,723.6	0.00	0.00	
10,000.0	90.00	0.00	7,270.0	2,823.6	-688.6	2,823.6	0.00	0.00	
10,100.0	90.00	0.00	7,270.0	2,923.6	-688.6	2,923.6	0.00	0.00	
10,200.0	90.00	0.00	7,270.0	3,023.6	-688.6	3,023.6	0.00	0.00	
10,300.0	90.00	0.00	7,270.0	3,123.6	-688.6	3,123.6	0.00	0.00	
10,400.0	90.00	0.00	7,270.0	3,223.6	-688.6	3,223.6	0.00	0.00	
10,500.0	90.00	0.00	7,270.0	3,323.6	-688.6	3,323.6	0.00	0.00	
10,600.0	90.00	0.00	7,270.0	3,423.6	-688.6	3,423.6	0.00	0.00	
10,700.0	90.00	0.00	7,270.0	3,523.6	-688.6	3,523.6	0.00	0.00	
10,800.0	90.00	0.00	7,270.0	3,623.6	-688.6	3,623.6	0.00	0.00	
10,900.0	90.00	0.00	7,270.0	3,723.6	-688.6	3,723.6	0.00	0.00	
11,000.0	90.00	0.00	7,270.0	3,823.6	-688.6	3,823.6	0.00	0.00	
11,100.0	90.00	0.00	7,270.0	3,923.6	-688.6	3,923.6	0.00	0.00	
11,200.0	90.00	0.00	7,270.0	4,023.6	-688.6	4,023.6	0.00	0.00	
11,300.0	90.00	0.00	7,270.0	4,123.6	-688.6	4,123.6	0.00	0.00	
11,400.0	90.00	0.00	7,270.0	4,223.6	-688.6	4,223.6	0.00	0.00	
11,500.0	90.00	0.00	7,270.0	4,323.6	-688.6	4,323.6	0.00	0.00	
11,600.0	90.00	0.00	7,270.0	4,423.6	-688.6	4,423.6	0.00	0.00	
11,700.0	90.00	0.00	7,270.0	4,523.6	-688.6	4,523.6	0.00	0.00	
11,800.0	90.00	0.00	7,270.0	4,623.6	-688.6	4,623.6	0.00	0.00	
11,844.2	90.00	0.00	7,270.0	4,667.7	-688.6	4,667.7	0.00	0.00	Start turn @ 11844' MD
11,900.0	90.00	359.44	7,270.0	4,723.6	-688.9	4,723.6	1.00	0.00	
12,000.0	90.00	358.44	7,270.0	4,823.5	-690.7	4,823.5	1.00	0.00	
12,039.6	90.00	358.05	7,270.0	4,863.1	-691.9	4,863.1	1.00	0.00	End of turn @ 12039' MD
12,100.0	90.00	358.05	7,270.0	4,923.5	-694.0	4,923.5	0.00	0.00	
12,200.0	90.00	358.05	7,270.0	5,023.4	-697.4	5,023.4	0.00	0.00	
12,300.0	90.00	358.05	7,270.0	5,123.4	-700.8	5,123.4	0.00	0.00	
12,400.0	90.00	358.05	7,270.0	5,223.3	-704.2	5,223.3	0.00	0.00	
12,500.0	90.00	358.05	7,270.0	5,323.3	-707.6	5,323.3	0.00	0.00	
12,600.0	90.00	358.05	7,270.0	5,423.2	-711.0	5,423.2	0.00	0.00	
12,700.0	90.00	358.05	7,270.0	5,523.1	-714.5	5,523.1	0.00	0.00	
12,800.0	90.00	358.05	7,270.0	5,623.1	-717.9	5,623.1	0.00	0.00	
12,900.0	90.00	358.05	7,270.0	5,723.0	-721.3	5,723.0	0.00	0.00	
13,000.0	90.00	358.05	7,270.0	5,823.0	-724.7	5,823.0	0.00	0.00	
13,100.0	90.00	358.05	7,270.0	5,922.9	-728.1	5,922.9	0.00	0.00	
13,200.0	90.00	358.05	7,270.0	6,022.9	-731.5	6,022.9	0.00	0.00	
13,300.0	90.00	358.05	7,270.0	6,122.8	-734.9	6,122.8	0.00	0.00	
13,400.0	90.00	358.05	7,270.0	6,222.7	-738.3	6,222.7	0.00	0.00	
13,500.0	90.00	358.05	7,270.0	6,322.7	-741.7	6,322.7	0.00	0.00	
13,600.0	90.00	358.05	7,270.0	6,422.6	-745.1	6,422.6	0.00	0.00	
13,700.0	90.00	358.05	7,270.0	6,522.6	-748.6	6,522.6	0.00	0.00	
13,800.0	90.00	358.05	7,270.0	6,622.5	-752.0	6,622.5	0.00	0.00	
13,900.0	90.00	358.05	7,270.0	6,722.4	-755.4	6,722.4	0.00	0.00	
14,000.0	90.00	358.05	7,270.0	6,822.4	-758.8	6,822.4	0.00	0.00	
14,100.0	90.00	358.05	7,270.0	6,922.3	-762.2	6,922.3	0.00	0.00	
14,200.0	90.00	358.05	7,270.0	7,022.3	-765.6	7,022.3	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site:	S18-T2N-R67W	North Reference:	True
Well:	Kugel 1D-18H-H267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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
14,288.6	90.00	358.05	7,270.0	7,110.8	-768.6	7,110.8	0.00	0.00	TD at 14288.6

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Kugel 1D-18H-H267 PBI - plan hits target center - Point	0.00	0.00	7,270.0	7,110.8	-768.6	1,301,342.36	3,159,714.17	40.159160	-104.928590
Kugel 1D-18H-H267 TG - plan hits target center - Point	0.00	0.00	7,270.0	4,667.7	-688.6	1,298,899.84	3,159,810.02	40.152453	-104.928303

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
410.0	410.0	Fox Hills - BASE			
4,324.9	4,305.0	Sussex			
4,594.4	4,573.0	Sussex Marker			
4,884.1	4,861.0	Shannon			
6,231.0	6,200.0	Teepee Buttes (*if present)			
7,228.4	7,133.0	Sharon Springs			
7,392.3	7,220.0	Niobrara			
7,526.6	7,260.0	B Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
500.0	500.0	0.0	0.0	KOP @ 500'
1,118.5	1,117.3	-6.0	-32.8	EOB; Inc=6.19°
6,723.0	6,689.2	-115.1	-626.7	Start build/turn @ 6723' MD
7,634.2	7,270.0	457.7	-688.6	LP @ 7270' TVD; 90°
11,844.2	7,270.0	4,667.7	-688.6	Start turn @ 11844' MD
12,039.6	7,270.0	4,863.1	-691.9	End of turn @ 12039' MD
14,288.6	7,270.0	7,110.8	-768.6	TD at 14288.6

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S18-T2N-R67W

Kugel 1D-18H-H267

Hz

Plan #1

Anticollision Report

17 June, 2013

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
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	6/17/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	14,227.8	Plan #1 (Hz)	Geolink MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S18-T2N-R67W						
BRETT 1 (EXISTING) - HS RESOURCES WELL - NO S						Out of range
BRETT 2 (EXISTING) - HS RESOURCES WELL - NO S						Out of range
BRETT 3 (EXISTING) - KERR-MCGEE WELL - NO SUR						Out of range
BRETT 4 (EXISTING) - KERR-MCGEE WELL - NO SUR						Out of range
DREW GAS UNIT TRUE 1 (EXISTING) - KERR-MCGEE						Out of range
FARNSWORTH 9-18A (EXISTING) - KERR-MCGEE WE						Out of range
HSR-OWEN 15-18A (EXISTING) - KERR-MCGEE WELL						Out of range
KUGEL 1 (EXISTING) - MACHII-ROSS WELL - NO SUR	8,372.8	7,255.0	194.6	156.1	5.059	CC, ES
KUGEL 1 (EXISTING) - MACHII-ROSS WELL - NO SUR	8,400.0	7,255.0	196.5	157.6	5.054	SF
Kugel 1A-18H-H267 - Hz - Plan #1	166.3	167.3	30.8	30.2	57.273	CC
Kugel 1A-18H-H267 - Hz - Plan #1	200.0	201.0	30.8	30.1	46.989	ES
Kugel 1A-18H-H267 - Hz - Plan #1	1,200.0	1,191.3	75.5	71.4	18.267	SF
Kugel 1B-18H-H267 - Hz - Plan #1	266.3	267.3	19.6	18.7	22.088	CC
Kugel 1B-18H-H267 - Hz - Plan #1	300.0	301.0	19.6	18.6	19.501	ES
Kugel 1B-18H-H267 - Hz - Plan #1	1,100.0	1,096.4	44.2	40.4	11.655	SF
Kugel 1C-18H-H267 - Hz - Plan #1	366.3	367.3	11.2	9.9	9.055	CC
Kugel 1C-18H-H267 - Hz - Plan #1	400.0	401.0	11.2	9.8	8.268	ES
Kugel 1C-18H-H267 - Hz - Plan #1	14,288.6	14,555.1	412.6	193.7	1.885	SF
Kugel 1E-18H-H267 - Hz - Plan #1	500.0	500.0	8.4	6.7	4.934	CC, ES
Kugel 1E-18H-H267 - Hz - Plan #1	14,288.6	14,466.6	410.9	193.1	1.887	SF
Kugel 1F-18H-H267 - Hz - Plan #1	500.0	500.0	19.6	17.9	11.512	CC, ES
Kugel 1F-18H-H267 - Hz - Plan #1	700.0	700.0	23.0	20.6	9.599	SF
Kugel 1G-18H-H267 - Hz - Plan #1	500.0	500.0	30.8	29.1	18.091	CC, ES
Kugel 1G-18H-H267 - Hz - Plan #1	700.0	698.8	37.3	34.9	15.573	SF
KUGEL 2-18 (EXISTING) - ENCANA WELL - NO SURVE	7,765.1	7,260.0	199.9	170.0	6.684	CC, ES, SF
KUGEL 31-18 (EXISTING) - ENCANA WELL - NO SURV						Out of range
KUGEL 32-18 (EXISTING) - MACHII-ROSS WELL - NO						Out of range
KUGEL 32-18 (EXISTING) NARC - NORTH AMERICAN						Out of range
KUGEL 32-18J (EXISTING) - MACHII-ROSS WELL - NO						Out of range
KUGEL 41-18 (EXISTING) - ENCANA WELL - ENCANA						Out of range
KUGEL 42-18 (EXISTING) - ENCANA WELL - NO SURV	500.0	488.0	56.5	54.8	33.221	CC, ES
KUGEL 42-18 (EXISTING) - ENCANA WELL - NO SURV	1,000.0	987.4	78.3	74.9	22.773	SF
MILLER 12-17 (EXISTING) - ENCANA WELL - SURVEY	594.1	578.4	72.4	70.2	33.840	CC
MILLER 12-17 (EXISTING) - ENCANA WELL - SURVEY	600.0	584.3	72.4	70.2	33.496	ES
MILLER 12-17 (EXISTING) - ENCANA WELL - SURVEY	1,400.0	1,384.4	114.1	109.0	22.623	SF
WANDELL 1 (EXISTING) - ENCANA WELL - NO SURVE	13,735.3	7,200.0	331.5	201.2	2.545	CC, ES, SF
WANDELL 21-7 (EXISTING) - ENCANA WELL - NO SUR						Out of range
WANDELL 31-7 (EXISTING) - ENCANA WELL - SURVE						Out of range
WANDELL 32-7 (EXISTING) - ENCANA WELL - NO SUR						Out of range
WANDELL 33-7 (EXISTING) - ENCANA WELL - PLAN O						Out of range
WANDELL 34-7 (EXISTING) - ENCANA WELL - SURVE						Out of range
WANDELL 41-7 (EXISTING) - ENCANA WELL - SURVE						Out of range
WANDELL 42-7 (EXISTING) - ENCANA WELL - SURVE						Out of range
WANDELL 43-7 (EXISTING) - ENCANA WELL - PLAN O	11,437.0	7,371.4	482.1	380.3	4.737	CC, ES, SF
WANDELL 4-6-7 (EXISTING) - ENCANA WELL - NO SU						Out of range
WANDELL 6-0-7 (EXISTING) - ENCANA WELL - SURVE	14,288.6	7,295.1	406.8	259.8	2.767	CC, ES, SF
WANDELL 6-4-7 (EXISTING) - ENCANA WELL - SURVE	11,917.4	7,590.6	59.0	-62.4	0.486	Level 1, CC, ES, SF
WANDELL 6-8-7 (EXISTING) - ENCANA WELL - SURVE	9,471.4	7,371.4	97.2	37.2	1.619	CC, ES, SF
WANDELL 8-2-7 (EXISTING) - ENCANA WELL - NO SU	13,820.9	7,202.0	193.8	62.0	1.470	Level 3, CC, ES, SF
WANDELL 8-4-7 (EXISTING) - ENCANA WELL - NO SU	13,800.7	7,203.0	198.1	66.7	1.507	CC, ES, SF
WANDELL E UNIT 1 (EXISTING) - ENCANA WELL - NO	10,367.6	7,225.0	283.3	211.7	3.959	CC, ES
WANDELL E UNIT 1 (EXISTING) - ENCANA WELL - NO	10,400.0	7,225.0	285.1	213.0	3.954	SF
WANDELL V 7-2 (EXISTING) - GERRITY OIL WELL - NO						Out of range

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)		Separation Factor	Warning
Offset Well - Wellbore - Design						
S18-T2N-R67W						
WANDELL V 7-7 (EXISTING) - GERRITY OIL WELL - NO						Out of range
WANDELL V 7-8 (EXISTING) - GERRITY OIL WELL - NO						Out of range

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - KUGEL 1 (EXISTING) - MACHII-ROSS WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 7989-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		
8,000.0	7,270.0	7,255.0	7,255.0	23.7	12.7	90.00	1,196.3	-494.0	420.5	387.5	32.97	12.754		
8,100.0	7,270.0	7,255.0	7,255.0	24.9	12.7	90.00	1,196.3	-494.0	335.1	300.7	34.39	9.744		
8,200.0	7,270.0	7,255.0	7,255.0	26.2	12.7	90.00	1,196.3	-494.0	260.2	224.4	35.85	7.259		
8,300.0	7,270.0	7,255.0	7,255.0	27.5	12.7	90.00	1,196.3	-494.0	207.8	170.4	37.35	5.562		
8,372.8	7,270.0	7,255.0	7,255.0	28.5	12.7	90.00	1,196.3	-494.0	194.6	156.1	38.47	5.059 CC, ES		
8,400.0	7,270.0	7,255.0	7,255.0	28.9	12.7	90.00	1,196.3	-494.0	196.5	157.6	38.88	5.054 SF		
8,500.0	7,270.0	7,255.0	7,255.0	30.3	12.7	90.00	1,196.3	-494.0	232.5	192.1	40.44	5.749		
8,600.0	7,270.0	7,255.0	7,255.0	31.8	12.7	90.00	1,196.3	-494.0	299.2	257.2	42.02	7.119		
8,700.0	7,270.0	7,255.0	7,255.0	33.2	12.7	90.00	1,196.3	-494.0	380.7	337.1	43.62	8.728		
8,800.0	7,270.0	7,255.0	7,255.0	34.8	12.7	90.00	1,196.3	-494.0	469.5	424.2	45.24	10.378		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - Kugel 1A-18H-H267 - 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	1.0	1.0	0.0	0.0	-89.95	0.0	-30.8	30.8					
100.0	100.0	101.0	101.0	0.2	0.2	-89.95	0.0	-30.8	30.8	30.4	0.31	100.689		
166.3	166.3	167.3	167.3	0.3	0.3	-89.95	0.0	-30.8	30.8	30.2	0.54	57.273 CC		
200.0	200.0	201.0	201.0	0.3	0.3	-89.95	0.0	-30.8	30.8	30.1	0.65	46.989 ES		
300.0	300.0	300.5	300.4	0.5	0.5	-90.12	-0.1	-31.6	31.6	30.6	1.00	31.525		
400.0	400.0	400.0	400.0	0.7	0.7	-90.56	-0.3	-34.2	34.2	32.9	1.36	25.242		
500.0	500.0	499.1	499.0	0.8	0.9	-91.16	-0.8	-38.5	38.6	36.9	1.72	22.476		
600.0	600.0	598.3	598.0	1.0	1.1	8.77	-1.4	-44.5	43.8	41.7	2.05	21.396		
700.0	700.0	697.3	696.7	1.2	1.3	8.54	-2.2	-52.2	49.0	46.6	2.39	20.464		
800.0	799.9	796.3	795.2	1.4	1.5	8.51	-3.2	-61.6	54.2	51.4	2.74	19.769		
900.0	899.7	895.2	893.5	1.6	1.8	8.61	-4.3	-72.7	59.4	56.3	3.09	19.229		
1,000.0	999.4	994.0	991.5	1.8	2.0	8.81	-5.6	-85.4	64.6	61.1	3.44	18.796		
1,100.0	1,098.9	1,092.7	1,089.1	2.0	2.3	9.09	-7.1	-99.8	69.8	66.0	3.78	18.439		
1,200.0	1,198.3	1,191.3	1,186.4	2.2	2.6	9.37	-8.8	-115.8	75.5	71.4	4.13	18.267 SF		
1,300.0	1,297.7	1,289.7	1,283.1	2.5	3.0	9.51	-10.6	-133.5	83.0	78.5	4.49	18.493		
1,400.0	1,397.2	1,387.8	1,379.3	2.7	3.4	9.53	-12.6	-152.8	92.1	87.3	4.84	19.040		
1,500.0	1,496.6	1,485.5	1,474.8	2.9	3.8	9.47	-14.8	-173.6	102.9	97.7	5.19	19.842		
1,600.0	1,596.0	1,582.9	1,569.5	3.2	4.2	9.34	-17.1	-195.9	115.5	109.9	5.54	20.850		
1,700.0	1,695.4	1,679.8	1,663.4	3.4	4.6	9.18	-19.6	-219.8	129.6	123.8	5.89	22.026		
1,800.0	1,794.8	1,776.2	1,756.4	3.7	5.1	9.00	-22.2	-245.1	145.5	139.3	6.23	23.342		
1,900.0	1,894.3	1,873.4	1,849.7	3.9	5.6	8.81	-25.0	-271.9	162.8	156.3	6.58	24.741		
2,000.0	1,993.7	1,971.8	1,944.2	4.2	6.1	8.65	-27.8	-299.4	180.4	173.5	6.93	26.026		
2,100.0	2,093.1	2,070.3	2,038.7	4.4	6.6	8.52	-30.7	-326.8	198.0	190.7	7.28	27.187		
2,200.0	2,192.5	2,168.7	2,133.2	4.7	7.1	8.41	-33.5	-354.3	215.6	207.9	7.63	28.242		
2,300.0	2,291.9	2,267.1	2,227.7	4.9	7.6	8.31	-36.4	-381.7	233.1	225.2	7.98	29.205		
2,400.0	2,391.3	2,365.6	2,322.2	5.2	8.2	8.23	-39.2	-409.2	250.7	242.4	8.33	30.087		
2,500.0	2,490.8	2,464.0	2,416.7	5.4	8.7	8.16	-42.1	-436.6	268.3	259.6	8.68	30.898		
2,600.0	2,590.2	2,562.5	2,511.2	5.7	9.2	8.10	-44.9	-464.1	285.9	276.8	9.03	31.646		
2,700.0	2,689.6	2,660.9	2,605.7	6.0	9.7	8.05	-47.8	-491.5	303.4	294.1	9.38	32.339		
2,800.0	2,789.0	2,759.4	2,700.2	6.2	10.2	8.00	-50.6	-519.0	321.0	311.3	9.73	32.982		
2,900.0	2,888.4	2,857.8	2,794.7	6.5	10.8	7.95	-53.5	-546.4	338.6	328.5	10.08	33.580		
3,000.0	2,987.8	2,956.2	2,889.2	6.7	11.3	7.92	-56.3	-573.9	356.2	345.7	10.43	34.139		
3,100.0	3,087.3	3,054.7	2,983.7	7.0	11.8	7.88	-59.2	-601.3	373.8	363.0	10.78	34.661		
3,200.0	3,186.7	3,153.1	3,078.2	7.2	12.3	7.85	-62.0	-628.8	391.3	380.2	11.13	35.151		
3,300.0	3,286.1	3,251.6	3,172.7	7.5	12.9	7.82	-64.9	-656.2	408.9	397.4	11.48	35.610		
3,400.0	3,385.5	3,350.0	3,267.2	7.7	13.4	7.79	-67.7	-683.6	426.5	414.7	11.83	36.043		
3,500.0	3,484.9	3,448.5	3,361.7	8.0	13.9	7.77	-70.6	-711.1	444.1	431.9	12.18	36.451		
3,600.0	3,584.4	3,546.9	3,456.2	8.2	14.4	7.74	-73.4	-738.5	461.6	449.1	12.53	36.836		
3,700.0	3,683.8	3,645.3	3,550.7	8.5	15.0	7.72	-76.3	-766.0	479.2	466.3	12.88	37.200		
3,800.0	3,783.2	3,743.8	3,645.2	8.8	15.5	7.70	-79.1	-793.4	496.8	483.6	13.23	37.545		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - Kugel 1B-18H-H267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-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	1.0	1.0	0.0	0.0	-89.95	0.0	-19.6	19.6					
100.0	100.0	101.0	101.0	0.2	0.2	-89.95	0.0	-19.6	19.6	19.3	0.31	64.075		
200.0	200.0	201.0	201.0	0.3	0.3	-89.95	0.0	-19.6	19.6	18.9	0.65	29.902		
266.3	266.3	267.3	267.3	0.4	0.4	-89.95	0.0	-19.6	19.6	18.7	0.89	22.088 CC		
300.0	300.0	301.0	301.0	0.5	0.5	-89.95	0.0	-19.6	19.6	18.6	1.00	19.501 ES		
400.0	400.0	400.6	400.6	0.7	0.7	-90.16	-0.1	-20.5	20.5	19.1	1.35	15.122		
500.0	500.0	500.2	500.2	0.8	0.9	-90.70	-0.3	-23.1	23.1	21.4	1.70	13.532		
600.0	600.0	599.7	599.6	1.0	1.0	9.34	-0.7	-27.4	26.6	24.5	2.05	12.967		
700.0	700.0	699.2	698.9	1.2	1.2	9.37	-1.2	-33.4	30.1	27.7	2.40	12.545		
800.0	799.9	798.6	798.0	1.4	1.4	9.67	-1.8	-41.2	33.6	30.8	2.74	12.235		
900.0	899.7	897.9	896.8	1.6	1.7	10.18	-2.6	-50.6	37.1	34.0	3.09	11.997		
1,000.0	999.4	997.2	995.5	1.8	1.9	10.83	-3.6	-61.8	40.6	37.2	3.44	11.808		
1,100.0	1,098.9	1,096.4	1,093.8	2.0	2.2	11.59	-4.7	-74.6	44.2	40.4	3.79	11.655 SF		
1,200.0	1,198.3	1,195.5	1,191.9	2.2	2.5	12.29	-5.9	-89.2	48.3	44.2	4.15	11.658		
1,300.0	1,297.7	1,294.4	1,289.5	2.5	2.8	12.65	-7.3	-105.3	54.2	49.7	4.50	12.032		
1,400.0	1,397.2	1,393.2	1,386.6	2.7	3.1	12.74	-8.8	-123.2	61.7	56.8	4.86	12.704		
1,500.0	1,496.6	1,491.6	1,483.0	2.9	3.5	12.63	-10.5	-142.6	70.9	65.7	5.21	13.613		
1,600.0	1,596.0	1,589.7	1,578.9	3.2	3.9	12.40	-12.3	-163.6	81.9	76.3	5.56	14.713		
1,700.0	1,695.4	1,688.8	1,675.3	3.4	4.3	12.15	-14.2	-185.9	93.9	88.0	5.92	15.867		
1,800.0	1,794.8	1,788.0	1,772.0	3.7	4.7	11.94	-16.1	-208.2	106.0	99.7	6.27	16.893		
1,900.0	1,894.3	1,887.3	1,868.7	3.9	5.1	11.78	-18.0	-230.6	118.0	111.4	6.63	17.810		
2,000.0	1,993.7	1,986.6	1,965.4	4.2	5.6	11.65	-19.9	-252.9	130.1	123.1	6.98	18.633		
2,100.0	2,093.1	2,085.8	2,062.1	4.4	6.0	11.55	-21.9	-275.3	142.2	134.8	7.34	19.377		
2,200.0	2,192.5	2,185.1	2,158.8	4.7	6.4	11.45	-23.8	-297.7	154.2	146.5	7.69	20.053		
2,300.0	2,291.9	2,284.4	2,255.5	4.9	6.8	11.38	-25.7	-320.0	166.3	158.3	8.05	20.668		
2,400.0	2,391.3	2,383.6	2,352.2	5.2	7.3	11.31	-27.6	-342.4	178.4	170.0	8.40	21.232		
2,500.0	2,490.8	2,482.9	2,448.9	5.4	7.7	11.25	-29.5	-364.7	190.5	181.7	8.76	21.750		
2,600.0	2,590.2	2,582.2	2,545.6	5.7	8.1	11.20	-31.4	-387.1	202.5	193.4	9.11	22.228		
2,700.0	2,689.6	2,681.4	2,642.3	6.0	8.5	11.15	-33.3	-409.5	214.6	205.1	9.47	22.670		
2,800.0	2,789.0	2,780.7	2,739.0	6.2	9.0	11.11	-35.2	-431.8	226.7	216.8	9.82	23.080		
2,900.0	2,888.4	2,880.0	2,835.7	6.5	9.4	11.07	-37.2	-454.2	238.7	228.6	10.18	23.461		
3,000.0	2,987.8	2,979.2	2,932.4	6.7	9.8	11.04	-39.1	-476.5	250.8	240.3	10.53	23.817		
3,100.0	3,087.3	3,078.5	3,029.1	7.0	10.3	11.01	-41.0	-498.9	262.9	252.0	10.89	24.149		
3,200.0	3,186.7	3,177.8	3,125.8	7.2	10.7	10.98	-42.9	-521.2	274.9	263.7	11.24	24.461		
3,300.0	3,286.1	3,277.1	3,222.5	7.5	11.1	10.96	-44.8	-543.6	287.0	275.4	11.60	24.753		
3,400.0	3,385.5	3,376.3	3,319.2	7.7	11.6	10.93	-46.7	-566.0	299.1	287.1	11.95	25.028		
3,500.0	3,484.9	3,475.6	3,415.9	8.0	12.0	10.91	-48.6	-588.3	311.2	298.9	12.30	25.288		
3,600.0	3,584.4	3,574.9	3,512.6	8.2	12.4	10.89	-50.5	-610.7	323.2	310.6	12.66	25.532		
3,700.0	3,683.8	3,674.1	3,609.3	8.5	12.9	10.87	-52.5	-633.0	335.3	322.3	13.01	25.764		
3,800.0	3,783.2	3,773.4	3,706.0	8.8	13.3	10.86	-54.4	-655.4	347.4	334.0	13.37	25.983		
3,900.0	3,882.6	3,872.7	3,802.7	9.0	13.7	10.84	-56.3	-677.7	359.4	345.7	13.72	26.190		
4,000.0	3,982.0	3,971.9	3,899.4	9.3	14.2	10.83	-58.2	-700.1	371.5	357.4	14.08	26.388		
4,100.0	4,081.4	4,071.2	3,996.1	9.5	14.6	10.81	-60.1	-722.5	383.6	369.2	14.43	26.575		
4,200.0	4,180.9	4,170.5	4,092.8	9.8	15.0	10.80	-62.0	-744.8	395.7	380.9	14.79	26.754		
4,300.0	4,280.3	4,269.7	4,189.5	10.0	15.5	10.79	-63.9	-767.2	407.7	392.6	15.14	26.924		
4,400.0	4,379.7	4,369.0	4,286.2	10.3	15.9	10.77	-65.8	-789.5	419.8	404.3	15.50	27.086		
4,500.0	4,479.1	4,468.3	4,382.9	10.6	16.4	10.76	-67.7	-811.9	431.9	416.0	15.85	27.241		
4,600.0	4,578.5	4,567.5	4,479.6	10.8	16.8	10.75	-69.7	-834.3	443.9	427.7	16.21	27.390		
4,700.0	4,678.0	4,666.8	4,576.3	11.1	17.2	10.74	-71.6	-856.6	456.0	439.4	16.56	27.532		
4,800.0	4,777.4	4,766.1	4,673.0	11.3	17.7	10.73	-73.5	-879.0	468.1	451.2	16.92	27.668		
4,900.0	4,876.8	4,865.4	4,769.7	11.6	18.1	10.73	-75.4	-901.3	480.2	462.9	17.27	27.798		
5,000.0	4,976.2	4,964.6	4,866.4	11.8	18.5	10.72	-77.3	-923.7	492.2	474.6	17.63	27.923		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - Kugel 1C-18H-H267 - 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	1.0	1.0	0.0	0.0	-89.96	0.0	-11.2	11.2					
100.0	100.0	101.0	101.0	0.2	0.2	-89.96	0.0	-11.2	11.2	10.9	0.31	36.614		
200.0	200.0	201.0	201.0	0.3	0.3	-89.96	0.0	-11.2	11.2	10.5	0.65	17.087		
300.0	300.0	301.0	301.0	0.5	0.5	-89.96	0.0	-11.2	11.2	10.2	1.00	11.144		
366.3	366.3	367.3	367.3	0.6	0.6	-89.96	0.0	-11.2	11.2	9.9	1.24	9.055 CC		
400.0	400.0	401.0	401.0	0.7	0.7	-89.96	0.0	-11.2	11.2	9.8	1.35	8.268 ES		
500.0	500.0	500.8	500.8	0.8	0.9	-90.43	-0.1	-12.1	12.1	10.4	1.70	7.090		
600.0	600.0	600.6	600.5	1.0	1.0	9.48	-0.4	-14.7	13.8	11.8	2.05	6.743		
700.0	700.0	700.3	700.1	1.2	1.2	9.55	-0.9	-19.0	15.6	13.2	2.40	6.501		
800.0	799.9	800.0	799.7	1.4	1.4	10.00	-1.5	-25.1	17.4	14.6	2.75	6.325		
900.0	899.7	899.7	899.0	1.6	1.6	10.73	-2.4	-32.8	19.2	16.1	3.10	6.193		
1,000.0	999.4	999.3	998.2	1.8	1.8	11.68	-3.5	-42.3	21.0	17.5	3.44	6.090		
1,100.0	1,098.9	1,098.9	1,097.2	2.0	2.1	12.77	-4.7	-53.5	22.8	19.0	3.80	6.008		
1,200.0	1,198.3	1,198.5	1,195.9	2.2	2.3	13.67	-6.1	-66.4	25.2	21.1	4.15	6.075		
1,300.0	1,297.7	1,297.9	1,294.2	2.5	2.6	13.82	-7.8	-81.0	29.3	24.8	4.51	6.504		
1,400.0	1,397.2	1,397.4	1,392.4	2.7	2.9	13.48	-9.6	-97.1	35.0	30.2	4.87	7.198		
1,500.0	1,496.6	1,497.2	1,490.8	2.9	3.2	13.16	-11.4	-113.7	41.0	35.8	5.22	7.859		
1,600.0	1,596.0	1,597.0	1,589.2	3.2	3.6	12.92	-13.2	-130.2	47.1	41.5	5.58	8.436		
1,700.0	1,695.4	1,696.9	1,687.7	3.4	3.9	12.73	-15.1	-146.7	53.1	47.1	5.93	8.944		
1,800.0	1,794.8	1,796.7	1,786.1	3.7	4.2	12.59	-16.9	-163.3	59.1	52.8	6.29	9.394		
1,900.0	1,894.3	1,896.5	1,884.5	3.9	4.5	12.47	-18.8	-179.8	65.1	58.5	6.65	9.795		
2,000.0	1,993.7	1,996.3	1,982.9	4.2	4.9	12.37	-20.6	-196.3	71.1	64.1	7.00	10.156		
2,100.0	2,093.1	2,096.1	2,081.4	4.4	5.2	12.29	-22.4	-212.9	77.2	69.8	7.36	10.482		
2,200.0	2,192.5	2,196.0	2,179.8	4.7	5.5	12.21	-24.3	-229.4	83.2	75.5	7.72	10.777		
2,300.0	2,291.9	2,295.8	2,278.2	4.9	5.9	12.15	-26.1	-245.9	89.2	81.1	8.07	11.047		
2,400.0	2,391.3	2,395.6	2,376.6	5.2	6.2	12.10	-28.0	-262.5	95.2	86.8	8.43	11.293		
2,500.0	2,490.8	2,495.4	2,475.0	5.4	6.5	12.05	-29.8	-279.0	101.2	92.5	8.79	11.520		
2,600.0	2,590.2	2,595.2	2,573.5	5.7	6.9	12.01	-31.6	-295.5	107.3	98.1	9.15	11.729		
2,700.0	2,689.6	2,695.1	2,671.9	6.0	7.2	11.97	-33.5	-312.1	113.3	103.8	9.50	11.922		
2,800.0	2,789.0	2,794.9	2,770.3	6.2	7.6	11.94	-35.3	-328.6	119.3	109.4	9.86	12.101		
2,900.0	2,888.4	2,894.7	2,868.7	6.5	7.9	11.90	-37.2	-345.1	125.3	115.1	10.22	12.268		
3,000.0	2,987.8	2,994.5	2,967.2	6.7	8.2	11.88	-39.0	-361.7	131.3	120.8	10.57	12.423		
3,100.0	3,087.3	3,094.3	3,065.6	7.0	8.6	11.85	-40.8	-378.2	137.4	126.4	10.93	12.568		
3,200.0	3,186.7	3,194.1	3,164.0	7.2	8.9	11.83	-42.7	-394.7	143.4	132.1	11.29	12.704		
3,300.0	3,286.1	3,294.0	3,262.4	7.5	9.2	11.81	-44.5	-411.3	149.4	137.8	11.64	12.832		
3,400.0	3,385.5	3,393.8	3,360.9	7.7	9.6	11.79	-46.4	-427.8	155.4	143.4	12.00	12.952		
3,500.0	3,484.9	3,493.6	3,459.3	8.0	9.9	11.77	-48.2	-444.3	161.5	149.1	12.36	13.065		
3,600.0	3,584.4	3,593.4	3,557.7	8.2	10.3	11.75	-50.1	-460.9	167.5	154.8	12.71	13.171		
3,700.0	3,683.8	3,693.2	3,656.1	8.5	10.6	11.74	-51.9	-477.4	173.5	160.4	13.07	13.272		
3,800.0	3,783.2	3,793.1	3,754.5	8.8	10.9	11.72	-53.7	-493.9	179.5	166.1	13.43	13.368		
3,900.0	3,882.6	3,892.9	3,853.0	9.0	11.3	11.71	-55.6	-510.5	185.5	171.8	13.79	13.458		
4,000.0	3,982.0	3,992.7	3,951.4	9.3	11.6	11.69	-57.4	-527.0	191.6	177.4	14.14	13.544		
4,100.0	4,081.4	4,092.5	4,049.8	9.5	12.0	11.68	-59.3	-543.5	197.6	183.1	14.50	13.626		
4,200.0	4,180.9	4,192.3	4,148.2	9.8	12.3	11.67	-61.1	-560.1	203.6	188.7	14.86	13.704		
4,300.0	4,280.3	4,292.1	4,246.7	10.0	12.6	11.66	-62.9	-576.6	209.6	194.4	15.21	13.778		
4,400.0	4,379.7	4,392.0	4,345.1	10.3	13.0	11.65	-64.8	-593.1	215.6	200.1	15.57	13.849		
4,500.0	4,479.1	4,491.8	4,443.5	10.6	13.3	11.64	-66.6	-609.7	221.7	205.7	15.93	13.916		
4,600.0	4,578.5	4,591.6	4,541.9	10.8	13.7	11.63	-68.5	-626.2	227.7	211.4	16.29	13.981		
4,700.0	4,678.0	4,691.4	4,640.3	11.1	14.0	11.62	-70.3	-642.8	233.7	217.1	16.64	14.043		
4,800.0	4,777.4	4,791.2	4,738.8	11.3	14.3	11.61	-72.1	-659.3	239.7	222.7	17.00	14.102		
4,900.0	4,876.8	4,891.1	4,837.2	11.6	14.7	11.61	-74.0	-675.8	245.7	228.4	17.36	14.159		
5,000.0	4,976.2	4,990.9	4,935.6	11.8	15.0	11.60	-75.8	-692.4	251.8	234.1	17.71	14.213		

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 Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - Kugel 1C-18H-H267 - 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)	
5,100.0	5,075.6	5,090.7	5,034.0	12.1	15.4	11.59	-77.7	-708.9	257.8	239.7	18.07	14.266		
5,200.0	5,175.0	5,190.5	5,132.5	12.3	15.7	11.58	-79.5	-725.4	263.8	245.4	18.43	14.316		
5,300.0	5,274.5	5,290.3	5,230.9	12.6	16.0	11.58	-81.3	-742.0	269.8	251.0	18.79	14.364		
5,400.0	5,373.9	5,390.2	5,329.3	12.9	16.4	11.57	-83.2	-758.5	275.9	256.7	19.14	14.411		
5,500.0	5,473.3	5,490.0	5,427.7	13.1	16.7	11.57	-85.0	-775.0	281.9	262.4	19.50	14.456		
5,600.0	5,572.7	5,589.8	5,526.1	13.4	17.1	11.56	-86.9	-791.6	287.9	268.0	19.86	14.499		
5,700.0	5,672.1	5,689.6	5,624.6	13.6	17.4	11.56	-88.7	-808.1	293.9	273.7	20.21	14.541		
5,800.0	5,771.5	5,789.4	5,723.0	13.9	17.8	11.55	-90.5	-824.6	299.9	279.4	20.57	14.581		
5,900.0	5,871.0	5,889.2	5,821.4	14.1	18.1	11.54	-92.4	-841.2	306.0	285.0	20.93	14.620		
6,000.0	5,970.4	5,989.1	5,919.8	14.4	18.4	11.54	-94.2	-857.7	312.0	290.7	21.28	14.657		
6,100.0	6,069.8	6,088.9	6,018.3	14.7	18.8	11.54	-96.1	-874.2	318.0	296.4	21.64	14.694		
6,200.0	6,169.2	6,188.7	6,116.7	14.9	19.1	11.53	-97.9	-890.8	324.0	302.0	22.00	14.729		
6,300.0	6,268.6	6,288.5	6,215.1	15.2	19.5	11.53	-99.7	-907.3	330.0	307.7	22.36	14.763		
6,400.0	6,368.1	6,388.3	6,313.5	15.4	19.8	11.52	-101.6	-923.8	336.1	313.4	22.71	14.796		
6,500.0	6,467.5	6,488.2	6,411.9	15.7	20.1	11.52	-103.4	-940.4	342.1	319.0	23.07	14.828		
6,600.0	6,566.9	6,588.0	6,510.4	15.9	20.5	11.51	-105.3	-956.9	348.1	324.7	23.43	14.859		
6,700.0	6,666.3	6,687.8	6,608.8	16.2	20.8	11.51	-107.1	-973.4	354.1	330.3	23.78	14.889		
6,800.0	6,765.6	6,787.4	6,707.0	16.4	21.2	-46.30	-108.9	-989.9	360.1	336.0	24.08	14.951		
6,900.0	6,862.9	6,884.7	6,802.9	16.6	21.5	-71.43	-110.7	-1,006.0	366.5	342.3	24.18	15.154		
7,000.0	6,955.2	6,976.7	6,893.6	16.8	21.8	-82.94	-112.4	-1,021.3	376.0	351.6	24.36	15.433		
7,100.0	7,039.8	7,076.2	6,991.6	17.1	22.1	-91.78	-108.4	-1,037.7	391.5	366.7	24.82	15.773		
7,200.0	7,114.1	7,189.8	7,100.6	17.3	22.5	-99.05	-83.1	-1,056.1	411.5	386.0	25.49	16.144		
7,300.0	7,175.8	7,319.3	7,216.2	17.7	22.8	-105.22	-28.4	-1,075.5	433.8	407.6	26.22	16.543		
7,400.0	7,223.1	7,469.1	7,330.6	18.2	23.3	-110.38	65.5	-1,094.7	455.4	428.7	26.79	17.003		
7,500.0	7,254.5	7,641.3	7,427.5	18.8	24.0	-114.25	206.2	-1,111.0	472.7	445.3	27.40	17.251		
7,600.0	7,269.0	7,832.2	7,481.5	19.6	25.0	-116.27	388.1	-1,120.0	481.9	453.6	28.27	17.046		
7,700.0	7,270.0	7,967.8	7,486.0	20.4	25.9	-116.45	523.6	-1,120.8	482.7	452.7	30.05	16.066		
7,800.0	7,270.0	8,067.8	7,486.0	21.4	26.7	-116.45	623.6	-1,120.8	482.7	450.5	32.23	14.980		
7,900.0	7,270.0	8,167.8	7,486.0	22.5	27.5	-116.45	723.6	-1,120.8	482.7	448.2	34.55	13.970		
8,000.0	7,270.0	8,267.8	7,486.0	23.7	28.5	-116.45	823.6	-1,120.8	482.7	445.7	37.00	13.046		
8,100.0	7,270.0	8,367.8	7,486.0	24.9	29.5	-116.45	923.6	-1,120.8	482.7	443.2	39.55	12.205		
8,200.0	7,270.0	8,467.8	7,486.0	26.2	30.6	-116.45	1,023.6	-1,120.8	482.7	440.5	42.18	11.444		
8,300.0	7,270.0	8,567.8	7,486.0	27.5	31.8	-116.45	1,123.6	-1,120.8	482.7	437.8	44.88	10.757		
8,400.0	7,270.0	8,667.8	7,486.0	28.9	33.0	-116.45	1,223.6	-1,120.8	482.7	435.1	47.63	10.136		
8,500.0	7,270.0	8,767.8	7,486.0	30.3	34.2	-116.45	1,323.6	-1,120.8	482.7	432.3	50.42	9.573		
8,600.0	7,270.0	8,867.8	7,486.0	31.8	35.5	-116.45	1,423.6	-1,120.8	482.7	429.5	53.26	9.064		
8,700.0	7,270.0	8,967.8	7,486.0	33.2	36.8	-116.45	1,523.6	-1,120.8	482.7	426.6	56.13	8.600		
8,800.0	7,270.0	9,067.8	7,486.0	34.8	38.2	-116.45	1,623.6	-1,120.8	482.7	423.7	59.03	8.178		
8,900.0	7,270.0	9,167.8	7,486.0	36.3	39.6	-116.45	1,723.6	-1,120.8	482.7	420.8	61.95	7.792		
9,000.0	7,270.0	9,267.8	7,486.0	37.8	41.0	-116.45	1,823.6	-1,120.8	482.7	417.8	64.89	7.439		
9,100.0	7,270.0	9,367.8	7,486.0	39.4	42.5	-116.45	1,923.6	-1,120.8	482.7	414.9	67.85	7.114		
9,200.0	7,270.0	9,467.8	7,486.0	41.0	43.9	-116.45	2,023.6	-1,120.8	482.7	411.9	70.83	6.815		
9,300.0	7,270.0	9,567.8	7,486.0	42.6	45.4	-116.45	2,123.6	-1,120.8	482.7	408.9	73.82	6.539		
9,400.0	7,270.0	9,667.8	7,486.0	44.2	46.9	-116.45	2,223.6	-1,120.8	482.7	405.9	76.82	6.284		
9,500.0	7,270.0	9,767.8	7,486.0	45.8	48.5	-116.45	2,323.6	-1,120.8	482.7	402.9	79.84	6.046		
9,600.0	7,270.0	9,867.8	7,486.0	47.4	50.0	-116.45	2,423.6	-1,120.8	482.7	399.9	82.86	5.826		
9,700.0	7,270.0	9,967.8	7,486.0	49.1	51.6	-116.45	2,523.6	-1,120.8	482.7	396.8	85.89	5.620		
9,800.0	7,270.0	10,067.8	7,486.0	50.7	53.1	-116.45	2,623.6	-1,120.8	482.7	393.8	88.93	5.428		
9,900.0	7,270.0	10,167.8	7,486.0	52.4	54.7	-116.45	2,723.6	-1,120.8	482.7	390.7	91.98	5.248		
10,000.0	7,270.0	10,267.8	7,486.0	54.0	56.3	-116.45	2,823.6	-1,120.8	482.7	387.7	95.03	5.079		
10,100.0	7,270.0	10,367.8	7,486.0	55.7	57.9	-116.45	2,923.6	-1,120.8	482.7	384.6	98.09	4.921		
10,200.0	7,270.0	10,467.8	7,486.0	57.4	59.5	-116.45	3,023.6	-1,120.8	482.7	381.6	101.16	4.772		

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 Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - Kugel 1C-18H-H267 - 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)				
10,300.0	7,270.0	10,567.8	7,486.0	59.0	61.1	-116.45	3,123.6	-1,120.8	482.7	378.5	104.23	4.631		
10,400.0	7,270.0	10,667.8	7,486.0	60.7	62.8	-116.45	3,223.6	-1,120.8	482.7	375.4	107.30	4.499		
10,500.0	7,270.0	10,767.8	7,486.0	62.4	64.4	-116.45	3,323.6	-1,120.8	482.7	372.3	110.38	4.373		
10,600.0	7,270.0	10,867.8	7,486.0	64.1	66.0	-116.45	3,423.6	-1,120.8	482.7	369.3	113.46	4.254		
10,700.0	7,270.0	10,967.8	7,486.0	65.8	67.7	-116.45	3,523.6	-1,120.8	482.7	366.2	116.55	4.142		
10,800.0	7,270.0	11,067.8	7,486.0	67.5	69.3	-116.45	3,623.6	-1,120.8	482.7	363.1	119.64	4.035		
10,900.0	7,270.0	11,167.8	7,486.0	69.2	71.0	-116.45	3,723.6	-1,120.8	482.7	360.0	122.73	3.933		
11,000.0	7,270.0	11,267.8	7,486.0	70.9	72.6	-116.45	3,823.6	-1,120.8	482.7	356.9	125.82	3.836		
11,100.0	7,270.0	11,367.8	7,486.0	72.6	74.3	-116.45	3,923.6	-1,120.8	482.7	353.8	128.92	3.744		
11,200.0	7,270.0	11,467.8	7,486.0	74.3	76.0	-116.45	4,023.6	-1,120.8	482.7	350.7	132.02	3.656		
11,300.0	7,270.0	11,567.8	7,486.0	76.0	77.6	-116.45	4,123.6	-1,120.8	482.7	347.6	135.12	3.573		
11,400.0	7,270.0	11,667.8	7,486.0	77.7	79.3	-116.45	4,223.6	-1,120.8	482.7	344.5	138.22	3.492		
11,500.0	7,270.0	11,767.8	7,486.0	79.4	81.0	-116.45	4,323.6	-1,120.8	482.7	341.4	141.33	3.416		
11,600.0	7,270.0	11,867.8	7,486.0	81.1	82.7	-116.45	4,423.6	-1,120.8	482.7	338.3	144.44	3.342		
11,700.0	7,270.0	11,967.8	7,486.0	82.8	84.3	-116.45	4,523.6	-1,120.8	482.7	335.2	147.54	3.272		
11,800.0	7,270.0	12,067.8	7,486.0	84.5	86.0	-116.45	4,623.6	-1,120.8	482.7	332.1	150.65	3.204		
11,900.0	7,270.0	12,167.8	7,486.0	86.3	87.7	-116.46	4,723.6	-1,120.8	482.5	328.5	154.01	3.133		
12,000.0	7,270.0	12,267.8	7,486.0	88.0	89.4	-116.57	4,823.5	-1,120.8	480.8	323.4	157.43	3.054		
12,100.0	7,270.0	12,367.8	7,486.0	89.7	91.1	-116.75	4,923.5	-1,120.8	477.9	317.4	160.47	2.978		
12,200.0	7,270.0	12,467.7	7,486.0	91.4	92.8	-116.93	5,023.4	-1,120.8	474.9	311.5	163.32	2.908		
12,300.0	7,270.0	12,567.7	7,486.0	93.2	94.5	-117.12	5,123.4	-1,120.8	471.8	305.7	166.16	2.840		
12,400.0	7,270.0	12,667.6	7,486.0	94.9	96.2	-117.31	5,223.3	-1,120.8	468.8	299.8	168.98	2.774		
12,500.0	7,270.0	12,767.5	7,486.0	96.6	97.9	-117.50	5,323.3	-1,120.8	465.8	294.0	171.79	2.711		
12,600.0	7,270.0	12,867.5	7,486.0	98.4	99.6	-117.70	5,423.2	-1,120.8	462.7	288.1	174.58	2.650		
12,700.0	7,270.0	12,967.4	7,486.0	100.1	101.3	-117.90	5,523.1	-1,120.8	459.7	282.4	177.36	2.592		
12,800.0	7,270.0	13,067.4	7,486.0	101.8	103.0	-118.10	5,623.1	-1,120.8	456.7	276.6	180.12	2.536		
12,900.0	7,270.0	13,167.3	7,486.0	103.6	104.7	-118.30	5,723.0	-1,120.8	453.7	270.8	182.87	2.481		
13,000.0	7,270.0	13,267.2	7,486.0	105.3	106.4	-118.51	5,823.0	-1,120.8	450.7	265.1	185.60	2.428		
13,100.0	7,270.0	13,367.2	7,486.0	107.0	108.1	-118.71	5,922.9	-1,120.8	447.7	259.4	188.31	2.378		
13,200.0	7,270.0	13,467.1	7,486.0	108.8	109.9	-118.93	6,022.9	-1,120.8	444.7	253.7	191.00	2.328		
13,300.0	7,270.0	13,567.1	7,486.0	110.5	111.6	-119.14	6,122.8	-1,120.8	441.7	248.1	193.67	2.281		
13,400.0	7,270.0	13,667.0	7,486.0	112.3	113.3	-119.36	6,222.7	-1,120.8	438.8	242.4	196.32	2.235		
13,500.0	7,270.0	13,767.0	7,486.0	114.0	115.0	-119.58	6,322.7	-1,120.8	435.8	236.8	198.95	2.190		
13,600.0	7,270.0	13,866.9	7,486.0	115.7	116.7	-119.80	6,422.6	-1,120.8	432.8	231.3	201.56	2.147		
13,700.0	7,270.0	13,966.8	7,486.0	117.5	118.4	-120.02	6,522.6	-1,120.8	429.9	225.7	204.15	2.106		
13,800.0	7,270.0	14,066.8	7,486.0	119.2	120.2	-120.25	6,622.5	-1,120.8	426.9	220.2	206.72	2.065		
13,900.0	7,270.0	14,166.7	7,486.0	121.0	121.9	-120.49	6,722.4	-1,120.8	424.0	214.7	209.26	2.026		
14,000.0	7,270.0	14,266.7	7,486.0	122.7	123.6	-120.72	6,822.4	-1,120.8	421.0	209.3	211.79	1.988		
14,100.0	7,270.0	14,366.6	7,486.0	124.4	125.3	-120.96	6,922.3	-1,120.8	418.1	203.8	214.28	1.951		
14,200.0	7,270.0	14,466.6	7,486.0	126.2	127.0	-121.20	7,022.3	-1,120.8	415.2	198.4	216.75	1.916		
14,288.6	7,270.0	14,555.1	7,486.0	127.7	128.6	-121.42	7,110.8	-1,120.8	412.6	193.7	218.92	1.885 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - Kugel 1E-18H-H267 - 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)				Between Centres (ft)	Between Ellipses (ft)		
0.0	0.0	0.0	0.0	0.0	0.0	90.06	0.0	8.4	8.4						
100.0	100.0	100.0	100.0	0.2	0.2	90.06	0.0	8.4	8.4	8.1	0.30	27.619			
200.0	200.0	200.0	200.0	0.3	0.3	90.06	0.0	8.4	8.4	7.7	0.65	12.849			
300.0	300.0	300.0	300.0	0.5	0.5	90.06	0.0	8.4	8.4	7.4	1.00	8.372			
400.0	400.0	400.0	400.0	0.7	0.7	90.06	0.0	8.4	8.4	7.0	1.35	6.209			
500.0	500.0	500.0	500.0	0.8	0.8	90.06	0.0	8.4	8.4	6.7	1.70	4.934 CC, ES			
600.0	600.0	600.0	600.0	1.0	1.0	-170.51	0.0	8.4	9.2	7.2	2.05	4.513			
700.0	700.0	700.2	700.1	1.2	1.2	-171.58	-0.2	7.5	11.0	8.6	2.40	4.583			
800.0	799.9	800.3	800.3	1.4	1.4	-171.59	-1.0	5.0	12.8	10.0	2.75	4.646			
900.0	899.7	900.6	900.4	1.6	1.6	-170.94	-2.2	0.8	14.6	11.5	3.10	4.705			
1,000.0	999.4	1,000.7	1,000.4	1.8	1.7	-169.89	-3.9	-5.0	16.4	13.0	3.44	4.771			
1,100.0	1,098.9	1,100.7	1,100.1	2.0	1.9	-169.56	-5.7	-11.4	19.5	15.7	3.79	5.139			
1,200.0	1,198.3	1,200.6	1,199.8	2.2	2.1	-169.84	-7.5	-17.8	23.7	19.6	4.15	5.718			
1,300.0	1,297.7	1,300.5	1,299.5	2.5	2.3	-170.05	-9.3	-24.1	27.9	23.4	4.50	6.212			
1,400.0	1,397.2	1,400.4	1,399.2	2.7	2.5	-170.21	-11.2	-30.5	32.2	27.3	4.85	6.634			
1,500.0	1,496.6	1,500.3	1,498.9	2.9	2.7	-170.33	-13.0	-36.9	36.4	31.2	5.21	6.998			
1,600.0	1,596.0	1,600.2	1,598.6	3.2	2.9	-170.42	-14.8	-43.2	40.7	35.1	5.56	7.316			
1,700.0	1,695.4	1,700.2	1,698.3	3.4	3.1	-170.50	-16.6	-49.6	44.9	39.0	5.91	7.596			
1,800.0	1,794.8	1,800.1	1,798.0	3.7	3.4	-170.56	-18.5	-56.0	49.1	42.9	6.26	7.845			
1,900.0	1,894.3	1,900.0	1,897.7	3.9	3.6	-170.62	-20.3	-62.3	53.4	46.8	6.62	8.067			
2,000.0	1,993.7	1,999.9	1,997.4	4.2	3.8	-170.66	-22.1	-68.7	57.6	50.7	6.97	8.266			
2,100.0	2,093.1	2,099.8	2,097.1	4.4	4.0	-170.70	-23.9	-75.1	61.9	54.5	7.33	8.446			
2,200.0	2,192.5	2,199.7	2,196.7	4.7	4.2	-170.74	-25.8	-81.4	66.1	58.4	7.68	8.609			
2,300.0	2,291.9	2,299.6	2,296.4	4.9	4.4	-170.77	-27.6	-87.8	70.3	62.3	8.03	8.758			
2,400.0	2,391.3	2,399.5	2,396.1	5.2	4.6	-170.79	-29.4	-94.2	74.6	66.2	8.39	8.895			
2,500.0	2,490.8	2,499.4	2,495.8	5.4	4.8	-170.82	-31.3	-100.5	78.8	70.1	8.74	9.020			
2,600.0	2,590.2	2,599.3	2,595.5	5.7	5.0	-170.84	-33.1	-106.9	83.1	74.0	9.09	9.135			
2,700.0	2,689.6	2,699.3	2,695.2	6.0	5.2	-170.86	-34.9	-113.3	87.3	77.9	9.45	9.242			
2,800.0	2,789.0	2,799.2	2,794.9	6.2	5.4	-170.87	-36.7	-119.6	91.5	81.7	9.80	9.342			
2,900.0	2,888.4	2,899.1	2,894.6	6.5	5.6	-170.89	-38.6	-126.0	95.8	85.6	10.15	9.434			
3,000.0	2,987.8	2,999.0	2,994.3	6.7	5.8	-170.91	-40.4	-132.4	100.0	89.5	10.51	9.520			
3,100.0	3,087.3	3,098.9	3,094.0	7.0	6.0	-170.92	-42.2	-138.7	104.3	93.4	10.86	9.600			
3,200.0	3,186.7	3,198.8	3,193.6	7.2	6.2	-170.93	-44.0	-145.1	108.5	97.3	11.21	9.676			
3,300.0	3,286.1	3,298.7	3,293.3	7.5	6.5	-170.94	-45.9	-151.5	112.7	101.2	11.57	9.746			
3,400.0	3,385.5	3,398.6	3,393.0	7.7	6.7	-170.95	-47.7	-157.8	117.0	105.1	11.92	9.813			
3,500.0	3,484.9	3,498.5	3,492.7	8.0	6.9	-170.96	-49.5	-164.2	121.2	109.0	12.28	9.875			
3,600.0	3,584.4	3,598.4	3,592.4	8.2	7.1	-170.97	-51.3	-170.6	125.5	112.8	12.63	9.935			
3,700.0	3,683.8	3,698.4	3,692.1	8.5	7.3	-170.98	-53.2	-176.9	129.7	116.7	12.98	9.991			
3,800.0	3,783.2	3,798.3	3,791.8	8.8	7.5	-170.99	-55.0	-183.3	134.0	120.6	13.34	10.044			
3,900.0	3,882.6	3,898.2	3,891.5	9.0	7.7	-171.00	-56.8	-189.7	138.2	124.5	13.69	10.094			
4,000.0	3,982.0	3,998.1	3,991.2	9.3	7.9	-171.00	-58.6	-196.0	142.4	128.4	14.04	10.141			
4,100.0	4,081.4	4,098.0	4,090.9	9.5	8.1	-171.01	-60.5	-202.4	146.7	132.3	14.40	10.187			
4,200.0	4,180.9	4,197.9	4,190.5	9.8	8.3	-171.02	-62.3	-208.8	150.9	136.2	14.75	10.230			
4,300.0	4,280.3	4,297.8	4,290.2	10.0	8.5	-171.02	-64.1	-215.1	155.2	140.0	15.11	10.271			
4,400.0	4,379.7	4,397.7	4,389.9	10.3	8.7	-171.03	-65.9	-221.5	159.4	143.9	15.46	10.310			
4,500.0	4,479.1	4,497.6	4,489.6	10.6	9.0	-171.03	-67.8	-227.9	163.6	147.8	15.81	10.348			
4,600.0	4,578.5	4,597.5	4,589.3	10.8	9.2	-171.04	-69.6	-234.2	167.9	151.7	16.17	10.384			
4,700.0	4,678.0	4,697.5	4,689.0	11.1	9.4	-171.04	-71.4	-240.6	172.1	155.6	16.52	10.418			
4,800.0	4,777.4	4,797.4	4,788.7	11.3	9.6	-171.05	-73.2	-247.0	176.4	159.5	16.87	10.451			
4,900.0	4,876.8	4,897.3	4,888.4	11.6	9.8	-171.05	-75.1	-253.3	180.6	163.4	17.23	10.482			
5,000.0	4,976.2	4,997.2	4,988.1	11.8	10.0	-171.06	-76.9	-259.7	184.8	167.3	17.58	10.513			
5,100.0	5,075.6	5,097.1	5,087.8	12.1	10.2	-171.06	-78.7	-266.1	189.1	171.1	17.94	10.542			

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 Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - Kugel 1E-18H-H267 - 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		
5,200.0	5,175.0	5,197.0	5,187.4	12.3	10.4	-171.06	-80.6	-272.4	193.3	175.0	18.29	10.570		
5,300.0	5,274.5	5,296.9	5,287.1	12.6	10.6	-171.07	-82.4	-278.8	197.6	178.9	18.64	10.597		
5,400.0	5,373.9	5,396.8	5,386.8	12.9	10.8	-171.07	-84.2	-285.2	201.8	182.8	19.00	10.622		
5,500.0	5,473.3	5,496.7	5,486.5	13.1	11.0	-171.08	-86.0	-291.6	206.0	186.7	19.35	10.647		
5,600.0	5,572.7	5,596.6	5,586.2	13.4	11.3	-171.08	-87.9	-297.9	210.3	190.6	19.70	10.671		
5,700.0	5,672.1	5,696.6	5,685.9	13.6	11.5	-171.08	-89.7	-304.3	214.5	194.5	20.06	10.695		
5,800.0	5,771.5	5,796.5	5,785.6	13.9	11.7	-171.08	-91.5	-310.7	218.8	198.3	20.41	10.717		
5,900.0	5,871.0	5,896.4	5,885.3	14.1	11.9	-171.09	-93.3	-317.0	223.0	202.2	20.77	10.739		
6,000.0	5,970.4	5,996.3	5,985.0	14.4	12.1	-171.09	-95.2	-323.4	227.2	206.1	21.12	10.759		
6,100.0	6,069.8	6,096.2	6,084.7	14.7	12.3	-171.09	-97.0	-329.8	231.5	210.0	21.47	10.780		
6,200.0	6,169.2	6,196.1	6,184.4	14.9	12.5	-171.10	-98.8	-336.1	235.7	213.9	21.83	10.799		
6,300.0	6,268.6	6,296.0	6,284.0	15.2	12.7	-171.10	-100.6	-342.5	240.0	217.8	22.18	10.818		
6,400.0	6,368.1	6,395.9	6,383.7	15.4	12.9	-171.10	-102.5	-348.9	244.2	221.7	22.54	10.836		
6,500.0	6,467.5	6,495.8	6,483.4	15.7	13.1	-171.10	-104.3	-355.2	248.4	225.6	22.89	10.854		
6,600.0	6,566.9	6,595.7	6,583.1	15.9	13.3	-171.10	-106.1	-361.6	252.7	229.4	23.24	10.871		
6,700.0	6,666.3	6,695.7	6,682.8	16.2	13.6	-171.11	-107.9	-368.0	256.9	233.3	23.60	10.888		
6,800.0	6,765.6	6,795.3	6,782.3	16.4	13.8	132.26	-109.8	-374.3	261.1	237.1	23.97	10.892		
6,900.0	6,862.9	6,892.7	6,879.4	16.6	14.0	113.93	-111.5	-380.5	266.0	241.5	24.44	10.883		
7,000.0	6,955.2	6,992.1	6,978.5	16.8	14.2	113.04	-108.5	-386.8	274.5	249.7	24.88	11.035		
7,100.0	7,039.8	7,099.5	7,083.2	17.1	14.3	115.70	-86.5	-393.5	286.6	261.6	25.00	11.467		
7,200.0	7,114.1	7,215.3	7,189.4	17.3	14.5	119.18	-41.4	-400.3	300.9	276.2	24.74	12.165		
7,300.0	7,175.8	7,340.5	7,291.6	17.7	14.8	122.59	30.4	-406.8	315.8	291.5	24.32	12.987		
7,400.0	7,223.1	7,475.7	7,381.5	18.2	15.2	125.47	130.7	-412.6	329.3	305.1	24.14	13.640		
7,500.0	7,254.5	7,619.9	7,448.9	18.8	16.0	127.55	257.8	-416.9	339.4	314.7	24.76	13.711		
7,600.0	7,269.0	7,770.6	7,483.2	19.6	17.2	128.61	404.0	-419.1	344.7	318.2	26.58	12.972		
7,700.0	7,270.0	7,890.3	7,486.0	20.4	18.3	128.73	523.6	-419.2	345.3	316.6	28.62	12.064		
7,800.0	7,270.0	7,990.3	7,486.0	21.4	19.4	128.73	623.6	-419.2	345.3	314.8	30.45	11.339		
7,900.0	7,270.0	8,090.3	7,486.0	22.5	20.6	128.73	723.6	-419.2	345.3	312.9	32.41	10.654		
8,000.0	7,270.0	8,190.3	7,486.0	23.7	21.9	128.73	823.6	-419.2	345.3	310.8	34.47	10.016		
8,100.0	7,270.0	8,290.3	7,486.0	24.9	23.2	128.73	923.6	-419.2	345.3	308.6	36.63	9.426		
8,200.0	7,270.0	8,390.3	7,486.0	26.2	24.6	128.73	1,023.6	-419.2	345.3	306.4	38.86	8.885		
8,300.0	7,270.0	8,490.3	7,486.0	27.5	26.0	128.73	1,123.6	-419.2	345.3	304.1	41.15	8.390		
8,400.0	7,270.0	8,590.3	7,486.0	28.9	27.5	128.73	1,223.6	-419.2	345.3	301.8	43.50	7.938		
8,500.0	7,270.0	8,690.3	7,486.0	30.3	29.0	128.73	1,323.6	-419.2	345.3	299.4	45.89	7.524		
8,600.0	7,270.0	8,790.3	7,486.0	31.8	30.5	128.73	1,423.6	-419.2	345.3	296.9	48.32	7.146		
8,700.0	7,270.0	8,890.3	7,486.0	33.2	32.0	128.73	1,523.6	-419.2	345.3	294.5	50.78	6.800		
8,800.0	7,270.0	8,990.3	7,486.0	34.8	33.6	128.73	1,623.6	-419.2	345.3	292.0	53.27	6.482		
8,900.0	7,270.0	9,090.3	7,486.0	36.3	35.2	128.73	1,723.6	-419.2	345.3	289.5	55.78	6.190		
9,000.0	7,270.0	9,190.3	7,486.0	37.8	36.8	128.73	1,823.6	-419.2	345.3	286.9	58.31	5.921		
9,100.0	7,270.0	9,290.3	7,486.0	39.4	38.4	128.73	1,923.6	-419.2	345.3	284.4	60.87	5.672		
9,200.0	7,270.0	9,390.3	7,486.0	41.0	40.0	128.73	2,023.6	-419.2	345.3	281.8	63.44	5.443		
9,300.0	7,270.0	9,490.3	7,486.0	42.6	41.6	128.73	2,123.6	-419.2	345.3	279.2	66.02	5.230		
9,400.0	7,270.0	9,590.3	7,486.0	44.2	43.3	128.73	2,223.6	-419.2	345.3	276.6	68.62	5.032		
9,500.0	7,270.0	9,690.3	7,486.0	45.8	44.9	128.73	2,323.6	-419.2	345.3	274.0	71.22	4.848		
9,600.0	7,270.0	9,790.3	7,486.0	47.4	46.6	128.73	2,423.6	-419.2	345.3	271.4	73.84	4.676		
9,700.0	7,270.0	9,890.3	7,486.0	49.1	48.3	128.73	2,523.6	-419.2	345.3	268.8	76.47	4.515		
9,800.0	7,270.0	9,990.3	7,486.0	50.7	49.9	128.73	2,623.6	-419.2	345.3	266.2	79.10	4.365		
9,900.0	7,270.0	10,090.3	7,486.0	52.4	51.6	128.73	2,723.6	-419.2	345.3	263.5	81.75	4.224		
10,000.0	7,270.0	10,190.3	7,486.0	54.0	53.3	128.73	2,823.6	-419.2	345.3	260.9	84.40	4.091		
10,100.0	7,270.0	10,290.3	7,486.0	55.7	55.0	128.73	2,923.6	-419.2	345.3	258.2	87.05	3.966		
10,200.0	7,270.0	10,390.3	7,486.0	57.4	56.7	128.73	3,023.6	-419.2	345.3	255.6	89.71	3.849		
10,300.0	7,270.0	10,490.3	7,486.0	59.0	58.4	128.73	3,123.6	-419.2	345.3	252.9	92.38	3.737		

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 Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - Kugel 1E-18H-H267 - 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)	
10,400.0	7,270.0	10,590.3	7,486.0	60.7	60.1	128.73	3,223.6	-419.2	345.3	250.2	95.05	3.632		
10,500.0	7,270.0	10,690.3	7,486.0	62.4	61.8	128.73	3,323.6	-419.2	345.3	247.5	97.72	3.533		
10,600.0	7,270.0	10,790.3	7,486.0	64.1	63.5	128.73	3,423.6	-419.2	345.3	244.9	100.40	3.439		
10,700.0	7,270.0	10,890.3	7,486.0	65.8	65.2	128.73	3,523.6	-419.2	345.3	242.2	103.08	3.349		
10,800.0	7,270.0	10,990.3	7,486.0	67.5	66.9	128.73	3,623.6	-419.2	345.3	239.5	105.77	3.264		
10,900.0	7,270.0	11,090.3	7,486.0	69.2	68.6	128.73	3,723.6	-419.2	345.3	236.8	108.46	3.183		
11,000.0	7,270.0	11,190.3	7,486.0	70.9	70.3	128.73	3,823.6	-419.2	345.3	234.1	111.15	3.106		
11,100.0	7,270.0	11,290.3	7,486.0	72.6	72.0	128.73	3,923.6	-419.2	345.3	231.4	113.85	3.033		
11,200.0	7,270.0	11,390.3	7,486.0	74.3	73.8	128.73	4,023.6	-419.2	345.3	228.7	116.54	2.963		
11,300.0	7,270.0	11,490.3	7,486.0	76.0	75.5	128.73	4,123.6	-419.2	345.3	226.0	119.24	2.895		
11,400.0	7,270.0	11,590.3	7,486.0	77.7	77.2	128.73	4,223.6	-419.2	345.3	223.3	121.94	2.831		
11,500.0	7,270.0	11,690.3	7,486.0	79.4	78.9	128.73	4,323.6	-419.2	345.3	220.6	124.65	2.770		
11,600.0	7,270.0	11,790.3	7,486.0	81.1	80.6	128.73	4,423.6	-419.2	345.3	217.9	127.35	2.711		
11,700.0	7,270.0	11,890.3	7,486.0	82.8	82.4	128.73	4,523.6	-419.2	345.3	215.2	130.06	2.655		
11,800.0	7,270.0	11,990.3	7,486.0	84.5	84.1	128.73	4,623.6	-419.2	345.3	212.5	132.77	2.600		
11,819.0	7,270.0	12,009.3	7,486.0	84.9	84.4	128.73	4,642.6	-419.2	345.3	212.0	133.31	2.590		
11,900.0	7,270.0	12,090.3	7,486.0	86.3	85.8	128.70	4,723.6	-419.2	345.5	209.8	135.65	2.547		
12,000.0	7,270.0	12,190.2	7,486.0	88.0	87.6	128.52	4,823.5	-419.2	346.9	208.0	138.89	2.498		
12,100.0	7,270.0	12,290.2	7,486.0	89.7	89.3	128.19	4,923.5	-419.2	349.5	207.2	142.27	2.456		
12,200.0	7,270.0	12,390.1	7,486.0	91.4	91.0	127.85	5,023.4	-419.2	352.2	206.5	145.64	2.418		
12,300.0	7,270.0	12,490.1	7,486.0	93.2	92.7	127.51	5,123.4	-419.2	354.9	205.9	149.02	2.381		
12,400.0	7,270.0	12,590.0	7,486.0	94.9	94.5	127.18	5,223.3	-419.3	357.6	205.2	152.40	2.346		
12,500.0	7,270.0	12,690.0	7,486.0	96.6	96.2	126.85	5,323.3	-419.3	360.3	204.5	155.80	2.313		
12,600.0	7,270.0	12,789.9	7,486.0	98.4	97.9	126.53	5,423.2	-419.3	363.0	203.8	159.22	2.280		
12,700.0	7,270.0	12,889.8	7,486.0	100.1	99.7	126.21	5,523.1	-419.3	365.8	203.2	162.64	2.249		
12,800.0	7,270.0	12,989.8	7,486.0	101.8	101.4	125.90	5,623.1	-419.3	368.5	202.5	166.07	2.219		
12,900.0	7,270.0	13,089.7	7,486.0	103.6	103.1	125.59	5,723.0	-419.3	371.3	201.8	169.51	2.191		
13,000.0	7,270.0	13,189.7	7,486.0	105.3	104.9	125.28	5,823.0	-419.3	374.1	201.1	172.95	2.163		
13,100.0	7,270.0	13,289.6	7,486.0	107.0	106.6	124.98	5,922.9	-419.3	376.9	200.5	176.41	2.136		
13,200.0	7,270.0	13,389.5	7,486.0	108.8	108.3	124.69	6,022.9	-419.3	379.7	199.8	179.88	2.111		
13,300.0	7,270.0	13,489.5	7,486.0	110.5	110.1	124.40	6,122.8	-419.3	382.5	199.1	183.35	2.086		
13,400.0	7,270.0	13,589.4	7,486.0	112.3	111.8	124.11	6,222.7	-419.3	385.3	198.5	186.83	2.062		
13,500.0	7,270.0	13,689.4	7,486.0	114.0	113.6	123.83	6,322.7	-419.3	388.1	197.8	190.32	2.039		
13,600.0	7,270.0	13,789.3	7,486.0	115.7	115.3	123.55	6,422.6	-419.3	391.0	197.2	193.81	2.017		
13,700.0	7,270.0	13,889.3	7,486.0	117.5	117.0	123.28	6,522.6	-419.3	393.8	196.5	197.31	1.996		
13,800.0	7,270.0	13,989.2	7,486.0	119.2	118.8	123.01	6,622.5	-419.3	396.7	195.9	200.81	1.975		
13,900.0	7,270.0	14,089.1	7,486.0	121.0	120.5	122.74	6,722.4	-419.3	399.5	195.2	204.32	1.955		
14,000.0	7,270.0	14,189.1	7,486.0	122.7	122.3	122.48	6,822.4	-419.3	402.4	194.6	207.84	1.936		
14,100.0	7,270.0	14,289.0	7,486.0	124.4	124.0	122.22	6,922.3	-419.3	405.3	193.9	211.36	1.918		
14,200.0	7,270.0	14,389.0	7,486.0	126.2	125.7	121.96	7,022.3	-419.3	408.2	193.3	214.89	1.900		
14,288.6	7,270.0	14,466.6	7,486.0	127.7	127.1	121.77	7,099.9	-419.3	410.9	193.1	217.79	1.887 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - Kugel 1F-18H-H267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-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	90.05	0.0	19.6	19.6					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	19.6	19.6	19.3	0.30	64.443		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	19.6	19.6	18.9	0.65	29.982		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	19.6	19.6	18.6	1.00	19.535		
400.0	400.0	400.0	400.0	0.7	0.7	90.05	0.0	19.6	19.6	18.2	1.35	14.487		
500.0	500.0	500.0	500.0	0.8	0.8	90.05	0.0	19.6	19.6	17.9	1.70	11.512 CC, ES		
600.0	600.0	600.0	600.0	1.0	1.0	-169.98	0.0	19.6	20.4	18.4	2.05	9.971		
700.0	700.0	700.0	700.0	1.2	1.2	-171.11	0.0	19.6	23.0	20.6	2.40	9.599 SF		
800.0	799.9	799.9	799.9	1.4	1.4	-172.52	0.0	19.6	27.3	24.6	2.75	9.956		
900.0	899.7	899.7	899.7	1.6	1.5	-173.88	0.0	19.6	33.4	30.3	3.09	10.800		
1,000.0	999.4	999.4	999.4	1.8	1.7	-175.03	0.0	19.6	41.2	37.8	3.44	11.985		
1,100.0	1,098.9	1,098.9	1,098.9	2.0	1.9	-175.96	0.0	19.6	50.8	47.0	3.78	13.419		
1,200.0	1,198.3	1,198.3	1,198.3	2.2	2.1	-176.67	0.0	19.6	61.5	57.4	4.13	14.888		
1,300.0	1,297.7	1,297.7	1,297.7	2.5	2.2	-177.16	0.0	19.6	72.2	67.8	4.48	16.134		
1,400.0	1,397.2	1,397.2	1,397.2	2.7	2.4	-177.53	0.0	19.6	83.0	78.2	4.83	17.202		
1,500.0	1,496.6	1,496.6	1,496.6	2.9	2.6	-177.82	0.0	19.6	93.8	88.6	5.17	18.126		
1,600.0	1,596.0	1,596.0	1,596.0	3.2	2.8	-178.04	0.0	19.6	104.5	99.0	5.52	18.935		
1,700.0	1,695.4	1,695.4	1,695.4	3.4	2.9	-178.22	0.0	19.6	115.3	109.4	5.87	19.648		
1,800.0	1,794.8	1,794.8	1,794.8	3.7	3.1	-178.38	0.0	19.6	126.1	119.9	6.22	20.281		
1,900.0	1,894.3	1,894.3	1,894.3	3.9	3.3	-178.50	0.0	19.6	136.8	130.3	6.56	20.848		
2,000.0	1,993.7	1,993.7	1,993.7	4.2	3.5	-178.61	0.0	19.6	147.6	140.7	6.91	21.357		
2,100.0	2,093.1	2,093.1	2,093.1	4.4	3.6	-178.71	0.0	19.6	158.4	151.1	7.26	21.818		
2,200.0	2,192.5	2,192.5	2,192.5	4.7	3.8	-178.79	0.0	19.6	169.2	161.5	7.61	22.237		
2,300.0	2,291.9	2,291.9	2,291.9	4.9	4.0	-178.86	0.0	19.6	179.9	172.0	7.95	22.619		
2,400.0	2,391.3	2,391.3	2,391.3	5.2	4.2	-178.93	0.0	19.6	190.7	182.4	8.30	22.970		
2,500.0	2,490.8	2,490.8	2,490.8	5.4	4.3	-178.98	0.0	19.6	201.5	192.8	8.65	23.292		
2,600.0	2,590.2	2,590.2	2,590.2	5.7	4.5	-179.04	0.0	19.6	212.2	203.2	9.00	23.589		
2,700.0	2,689.6	2,689.6	2,689.6	6.0	4.7	-179.08	0.0	19.6	223.0	213.7	9.35	23.864		
2,800.0	2,789.0	2,789.0	2,789.0	6.2	4.8	-179.12	0.0	19.6	233.8	224.1	9.69	24.120		
2,900.0	2,888.4	2,888.4	2,888.4	6.5	5.0	-179.16	0.0	19.6	244.6	234.5	10.04	24.357		
3,000.0	2,987.8	2,987.8	2,987.8	6.7	5.2	-179.20	0.0	19.6	255.3	244.9	10.39	24.579		
3,100.0	3,087.3	3,087.3	3,087.3	7.0	5.4	-179.23	0.0	19.6	266.1	255.4	10.74	24.787		
3,200.0	3,186.7	3,186.7	3,186.7	7.2	5.5	-179.26	0.0	19.6	276.9	265.8	11.08	24.981		
3,300.0	3,286.1	3,286.1	3,286.1	7.5	5.7	-179.29	0.0	19.6	287.7	276.2	11.43	25.164		
3,400.0	3,385.5	3,385.5	3,385.5	7.7	5.9	-179.31	0.0	19.6	298.4	286.6	11.78	25.336		
3,500.0	3,484.9	3,484.9	3,484.9	8.0	6.1	-179.34	0.0	19.6	309.2	297.1	12.13	25.498		
3,600.0	3,584.4	3,584.4	3,584.4	8.2	6.2	-179.36	0.0	19.6	320.0	307.5	12.47	25.651		
3,700.0	3,683.8	3,683.8	3,683.8	8.5	6.4	-179.38	0.0	19.6	330.7	317.9	12.82	25.796		
3,800.0	3,783.2	3,783.2	3,783.2	8.8	6.6	-179.40	0.0	19.6	341.5	328.4	13.17	25.933		
3,900.0	3,882.6	3,882.6	3,882.6	9.0	6.8	-179.42	0.0	19.6	352.3	338.8	13.52	26.063		
4,000.0	3,982.0	3,982.0	3,982.0	9.3	6.9	-179.44	0.0	19.6	363.1	349.2	13.86	26.187		
4,100.0	4,081.4	4,085.2	4,085.2	9.5	7.1	-179.38	-0.5	19.2	373.4	359.2	14.22	26.263		
4,200.0	4,180.9	4,189.4	4,189.4	9.8	7.3	-179.12	-2.6	17.9	382.6	368.0	14.58	26.249		
4,300.0	4,280.3	4,293.8	4,293.6	10.0	7.5	-178.67	-6.4	15.5	390.6	375.6	14.93	26.152		
4,400.0	4,379.7	4,393.9	4,393.6	10.3	7.7	-178.14	-10.8	12.6	397.8	382.5	15.29	26.025		
4,500.0	4,479.1	4,493.6	4,493.1	10.6	7.8	-177.62	-15.2	9.8	405.1	389.5	15.64	25.904		
4,600.0	4,578.5	4,593.2	4,592.7	10.8	8.0	-177.13	-19.7	6.9	412.5	396.5	15.99	25.790		
4,700.0	4,678.0	4,692.9	4,692.2	11.1	8.2	-176.65	-24.1	4.1	419.8	403.5	16.35	25.680		
4,800.0	4,777.4	4,792.6	4,791.7	11.3	8.4	-176.19	-28.6	1.2	427.2	410.5	16.70	25.575		
4,900.0	4,876.8	4,892.2	4,891.3	11.6	8.5	-175.74	-33.0	-1.6	434.6	417.6	17.06	25.474		
5,000.0	4,976.2	4,991.9	4,990.8	11.8	8.7	-175.31	-37.4	-4.5	442.1	424.6	17.42	25.377		
5,100.0	5,075.6	5,091.6	5,090.3	12.1	8.9	-174.90	-41.9	-7.3	449.5	431.8	17.78	25.285		

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 Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design													S18-T2N-R67W - Kugel 1F-18H-H267 - 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 Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis							
5,200.0	5,175.0	5,191.2	5,189.8	12.3	9.1	-174.49	-46.3	-10.2	457.0	438.9	18.14	25.195						
5,300.0	5,274.5	5,290.9	5,289.4	12.6	9.3	-174.10	-50.8	-13.1	464.5	446.0	18.50	25.110						
5,400.0	5,373.9	5,390.6	5,388.9	12.9	9.5	-173.73	-55.2	-15.9	472.1	453.2	18.86	25.027						
5,500.0	5,473.3	5,490.2	5,488.4	13.1	9.6	-173.36	-59.7	-18.8	479.6	460.4	19.22	24.948						
5,600.0	5,572.7	5,589.9	5,588.0	13.4	9.8	-173.01	-64.1	-21.6	487.2	467.6	19.59	24.871						
5,700.0	5,672.1	5,689.6	5,687.5	13.6	10.0	-172.67	-68.5	-24.5	494.8	474.8	19.95	24.797						

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - Kugel 1G-18H-H267 - 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	90.05	0.0	30.8	30.8					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	30.8	30.8	30.5	0.30	101.268		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	30.8	30.8	30.1	0.65	47.114		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	30.8	30.8	29.8	1.00	30.698		
400.0	400.0	400.0	400.0	0.7	0.7	90.05	0.0	30.8	30.8	29.4	1.35	22.766		
500.0	500.0	500.0	500.0	0.8	0.8	90.05	0.0	30.8	30.8	29.1	1.70	18.091 CC, ES		
600.0	600.0	599.5	599.5	1.0	1.0	-169.14	-0.4	31.5	32.4	30.3	2.05	15.816		
700.0	700.0	698.8	698.8	1.2	1.2	-168.16	-1.5	33.8	37.3	34.9	2.40	15.573 SF		
800.0	799.9	798.3	798.2	1.4	1.4	-167.18	-3.3	37.4	45.2	42.4	2.74	16.457		
900.0	899.7	897.8	897.6	1.6	1.6	-166.87	-5.1	41.0	54.8	51.7	3.09	17.719		
1,000.0	999.4	997.2	996.9	1.8	1.7	-166.99	-6.8	44.6	66.1	62.7	3.44	19.220		
1,100.0	1,098.9	1,096.4	1,096.0	2.0	1.9	-167.35	-8.6	48.1	79.1	75.3	3.79	20.894		
1,200.0	1,198.3	1,195.3	1,194.9	2.2	2.1	-167.78	-10.4	51.7	93.3	89.1	4.14	22.545		
1,300.0	1,297.7	1,294.3	1,293.8	2.5	2.3	-168.11	-12.1	55.3	107.4	103.0	4.49	23.940		
1,400.0	1,397.2	1,393.3	1,392.7	2.7	2.5	-168.35	-13.9	58.9	121.6	116.8	4.84	25.133		
1,500.0	1,496.6	1,492.3	1,491.6	2.9	2.7	-168.55	-15.7	62.5	135.8	130.6	5.19	26.164		
1,600.0	1,596.0	1,591.3	1,590.5	3.2	2.8	-168.71	-17.4	66.1	150.0	144.4	5.54	27.063		
1,700.0	1,695.4	1,690.3	1,689.4	3.4	3.0	-168.84	-19.2	69.6	164.2	158.3	5.89	27.855		
1,800.0	1,794.8	1,789.3	1,788.3	3.7	3.2	-168.95	-20.9	73.2	178.4	172.1	6.25	28.558		
1,900.0	1,894.3	1,888.3	1,887.3	3.9	3.4	-169.05	-22.7	76.8	192.5	185.9	6.60	29.186		
2,000.0	1,993.7	1,987.3	1,986.2	4.2	3.6	-169.13	-24.5	80.4	206.7	199.8	6.95	29.750		
2,100.0	2,093.1	2,086.2	2,085.1	4.4	3.8	-169.20	-26.2	84.0	220.9	213.6	7.30	30.260		
2,200.0	2,192.5	2,185.2	2,184.0	4.7	4.0	-169.26	-28.0	87.5	235.1	227.4	7.65	30.722		
2,300.0	2,291.9	2,284.2	2,282.9	4.9	4.1	-169.32	-29.8	91.1	249.3	241.3	8.00	31.144		
2,400.0	2,391.3	2,383.2	2,381.8	5.2	4.3	-169.37	-31.5	94.7	263.5	255.1	8.36	31.530		
2,500.0	2,490.8	2,482.2	2,480.7	5.4	4.5	-169.41	-33.3	98.3	277.7	269.0	8.71	31.885		
2,600.0	2,590.2	2,581.2	2,579.6	5.7	4.7	-169.45	-35.1	101.9	291.8	282.8	9.06	32.213		
2,700.0	2,689.6	2,680.2	2,678.5	6.0	4.9	-169.49	-36.8	105.4	306.0	296.6	9.41	32.516		
2,800.0	2,789.0	2,779.2	2,777.4	6.2	5.1	-169.52	-38.6	109.0	320.2	310.5	9.76	32.797		
2,900.0	2,888.4	2,878.1	2,876.3	6.5	5.3	-169.55	-40.4	112.6	334.4	324.3	10.12	33.058		
3,000.0	2,987.8	2,977.1	2,975.2	6.7	5.4	-169.58	-42.1	116.2	348.6	338.1	10.47	33.302		
3,100.0	3,087.3	3,076.1	3,074.2	7.0	5.6	-169.60	-43.9	119.8	362.8	352.0	10.82	33.530		
3,200.0	3,186.7	3,175.1	3,173.1	7.2	5.8	-169.63	-45.7	123.4	377.0	365.8	11.17	33.743		
3,300.0	3,286.1	3,274.1	3,272.0	7.5	6.0	-169.65	-47.4	126.9	391.2	379.6	11.52	33.944		
3,400.0	3,385.5	3,373.1	3,370.9	7.7	6.2	-169.67	-49.2	130.5	405.3	393.5	11.88	34.132		
3,500.0	3,484.9	3,472.1	3,469.8	8.0	6.4	-169.69	-51.0	134.1	419.5	407.3	12.23	34.310		
3,600.0	3,584.4	3,571.1	3,568.7	8.2	6.6	-169.71	-52.7	137.7	433.7	421.1	12.58	34.477		
3,700.0	3,683.8	3,670.1	3,667.6	8.5	6.7	-169.72	-54.5	141.3	447.9	435.0	12.93	34.636		
3,800.0	3,783.2	3,769.0	3,766.5	8.8	6.9	-169.74	-56.2	144.8	462.1	448.8	13.28	34.786		
3,900.0	3,882.6	3,868.0	3,865.4	9.0	7.1	-169.75	-58.0	148.4	476.3	462.6	13.64	34.928		
4,000.0	3,982.0	3,967.0	3,964.3	9.3	7.3	-169.77	-59.8	152.0	490.5	476.5	13.99	35.064		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - KUGEL 2-18 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8060-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		
7,300.0	7,175.8	7,165.8	7,165.8	17.7	12.5	42.98	588.7	-488.7	485.2	461.5	23.75	20.434		
7,400.0	7,223.1	7,213.1	7,213.1	18.2	12.6	56.82	588.7	-488.7	408.2	383.5	24.75	16.496		
7,500.0	7,254.5	7,244.5	7,244.5	18.8	12.6	73.75	588.7	-488.7	330.1	303.5	26.63	12.395		
7,600.0	7,269.0	7,259.0	7,259.0	19.6	12.7	87.23	588.7	-488.7	259.2	231.2	28.02	9.249		
7,700.0	7,270.0	7,260.0	7,260.0	20.4	12.7	90.00	588.7	-488.7	210.3	181.1	29.12	7.219		
7,765.1	7,270.0	7,260.0	7,260.0	21.1	12.7	90.00	588.7	-488.7	199.9	170.0	29.91	6.684 CC, ES, SF		
7,800.0	7,270.0	7,260.0	7,260.0	21.4	12.7	90.00	588.7	-488.7	202.9	172.6	30.33	6.691		
7,900.0	7,270.0	7,260.0	7,260.0	22.5	12.7	90.00	588.7	-488.7	241.1	209.5	31.62	7.626		
8,000.0	7,270.0	7,260.0	7,260.0	23.7	12.7	90.00	588.7	-488.7	308.4	275.4	32.98	9.352		
8,100.0	7,270.0	7,260.0	7,260.0	24.9	12.7	90.00	588.7	-488.7	390.0	355.6	34.40	11.338		
8,200.0	7,270.0	7,260.0	7,260.0	26.2	12.7	90.00	588.7	-488.7	478.6	442.7	35.86	13.347		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - KUGEL 42-18 (EXISTING) - ENCANA WELL - NO SURVEYS														Offset Site Error:	0.0 ft
Survey Program: 8095-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	76.95	12.8	55.1	57.8						
100.0	100.0	88.0	88.0	0.2	0.2	76.95	12.8	55.1	56.5	56.2	0.31	184.990			
200.0	200.0	188.0	188.0	0.3	0.3	76.95	12.8	55.1	56.5	55.9	0.65	86.359			
300.0	300.0	288.0	288.0	0.5	0.5	76.95	12.8	55.1	56.5	55.5	1.00	56.327			
400.0	400.0	388.0	388.0	0.7	0.7	76.95	12.8	55.1	56.5	55.2	1.35	41.793			
500.0	500.0	488.0	488.0	0.8	0.9	76.95	12.8	55.1	56.5	54.8	1.70	33.221 CC, ES			
600.0	600.0	588.0	588.0	1.0	1.0	177.40	12.8	55.1	57.4	55.4	2.05	27.995			
700.0	700.0	688.0	688.0	1.2	1.2	177.51	12.8	55.1	60.0	57.6	2.40	25.020			
800.0	799.9	787.9	787.9	1.4	1.4	177.67	12.8	55.1	64.4	61.6	2.75	23.440			
900.0	899.7	887.7	887.7	1.6	1.5	177.87	12.8	55.1	70.5	67.4	3.09	22.784			
1,000.0	999.4	987.4	987.4	1.8	1.7	178.08	12.8	55.1	78.3	74.9	3.44	22.773 SF			
1,100.0	1,098.9	1,086.9	1,086.9	2.0	1.9	178.29	12.8	55.1	87.9	84.1	3.78	23.231			
1,200.0	1,198.3	1,186.3	1,186.3	2.2	2.1	178.48	12.8	55.1	98.6	94.5	4.13	23.879			
1,300.0	1,297.7	1,285.7	1,285.7	2.5	2.2	178.63	12.8	55.1	109.4	104.9	4.48	24.429			
1,400.0	1,397.2	1,385.2	1,385.2	2.7	2.4	178.75	12.8	55.1	120.2	115.4	4.83	24.900			
1,500.0	1,496.6	1,484.6	1,484.6	2.9	2.6	178.85	12.8	55.1	131.0	125.8	5.17	25.309			
1,600.0	1,596.0	1,584.0	1,584.0	3.2	2.8	178.94	12.8	55.1	141.7	136.2	5.52	25.665			
1,700.0	1,695.4	1,683.4	1,683.4	3.4	2.9	179.01	12.8	55.1	152.5	146.6	5.87	25.980			
1,800.0	1,794.8	1,782.8	1,782.8	3.7	3.1	179.08	12.8	55.1	163.3	157.1	6.22	26.260			
1,900.0	1,894.3	1,882.3	1,882.3	3.9	3.3	179.14	12.8	55.1	174.0	167.5	6.57	26.510			
2,000.0	1,993.7	1,981.7	1,981.7	4.2	3.5	179.19	12.8	55.1	184.8	177.9	6.91	26.735			
2,100.0	2,093.1	2,081.1	2,081.1	4.4	3.6	179.23	12.8	55.1	195.6	188.3	7.26	26.938			
2,200.0	2,192.5	2,180.5	2,180.5	4.7	3.8	179.27	12.8	55.1	206.4	198.8	7.61	27.123			
2,300.0	2,291.9	2,279.9	2,279.9	4.9	4.0	179.31	12.8	55.1	217.1	209.2	7.96	27.292			
2,400.0	2,391.3	2,379.3	2,379.3	5.2	4.2	179.34	12.8	55.1	227.9	219.6	8.30	27.447			
2,500.0	2,490.8	2,478.8	2,478.8	5.4	4.3	179.37	12.8	55.1	238.7	230.0	8.65	27.589			
2,600.0	2,590.2	2,578.2	2,578.2	5.7	4.5	179.40	12.8	55.1	249.5	240.5	9.00	27.720			
2,700.0	2,689.6	2,677.6	2,677.6	6.0	4.7	179.42	12.8	55.1	260.2	250.9	9.35	27.842			
2,800.0	2,789.0	2,777.0	2,777.0	6.2	4.8	179.45	12.8	55.1	271.0	261.3	9.69	27.955			
2,900.0	2,888.4	2,876.4	2,876.4	6.5	5.0	179.47	12.8	55.1	281.8	271.7	10.04	28.060			
3,000.0	2,987.8	2,975.8	2,975.8	6.7	5.2	179.49	12.8	55.1	292.6	282.2	10.39	28.158			
3,100.0	3,087.3	3,075.3	3,075.3	7.0	5.4	179.50	12.8	55.1	303.3	292.6	10.74	28.249			
3,200.0	3,186.7	3,174.7	3,174.7	7.2	5.5	179.52	12.8	55.1	314.1	303.0	11.09	28.335			
3,300.0	3,286.1	3,274.1	3,274.1	7.5	5.7	179.54	12.8	55.1	324.9	313.4	11.43	28.416			
3,400.0	3,385.5	3,373.5	3,373.5	7.7	5.9	179.55	12.8	55.1	335.6	323.9	11.78	28.492			
3,500.0	3,484.9	3,472.9	3,472.9	8.0	6.1	179.57	12.8	55.1	346.4	334.3	12.13	28.564			
3,600.0	3,584.4	3,572.4	3,572.4	8.2	6.2	179.58	12.8	55.1	357.2	344.7	12.48	28.631			
3,700.0	3,683.8	3,671.8	3,671.8	8.5	6.4	179.59	12.8	55.1	368.0	355.1	12.82	28.695			
3,800.0	3,783.2	3,771.2	3,771.2	8.8	6.6	179.60	12.8	55.1	378.7	365.6	13.17	28.756			
3,900.0	3,882.6	3,870.6	3,870.6	9.0	6.8	179.61	12.8	55.1	389.5	376.0	13.52	28.813			
4,000.0	3,982.0	3,970.0	3,970.0	9.3	6.9	179.62	12.8	55.1	400.3	386.4	13.87	28.868			
4,100.0	4,081.4	4,069.4	4,069.4	9.5	7.1	179.63	12.8	55.1	411.1	396.8	14.21	28.920			
4,200.0	4,180.9	4,168.9	4,168.9	9.8	7.3	179.64	12.8	55.1	421.8	407.3	14.56	28.969			
4,300.0	4,280.3	4,268.3	4,268.3	10.0	7.4	179.65	12.8	55.1	432.6	417.7	14.91	29.016			
4,400.0	4,379.7	4,367.7	4,367.7	10.3	7.6	179.66	12.8	55.1	443.4	428.1	15.26	29.061			
4,500.0	4,479.1	4,467.1	4,467.1	10.6	7.8	179.67	12.8	55.1	454.2	438.6	15.60	29.104			
4,600.0	4,578.5	4,566.5	4,566.5	10.8	8.0	179.68	12.8	55.1	464.9	449.0	15.95	29.146			
4,700.0	4,678.0	4,666.0	4,666.0	11.1	8.1	179.68	12.8	55.1	475.7	459.4	16.30	29.185			
4,800.0	4,777.4	4,765.4	4,765.4	11.3	8.3	179.69	12.8	55.1	486.5	469.8	16.65	29.223			
4,900.0	4,876.8	4,864.8	4,864.8	11.6	8.5	179.70	12.8	55.1	497.3	480.3	17.00	29.259			

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 Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - MILLER 12-17 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 825-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	85.36	6.2	76.6	78.7					
100.0	100.0	83.2	83.2	0.2	0.2	85.51	6.0	76.5	76.7	76.4	0.30	255.609		
200.0	200.0	183.5	183.5	0.3	0.4	86.06	5.2	76.1	76.3	75.6	0.65	116.818		
300.0	300.0	283.7	283.7	0.5	0.6	87.06	3.9	75.4	75.5	74.5	1.00	75.112		
400.0	400.0	384.0	383.9	0.7	0.8	88.51	1.9	74.4	74.4	73.0	1.36	54.867		
500.0	500.0	484.1	484.1	0.8	1.0	90.47	-0.6	73.0	73.1	71.3	1.71	42.833		
594.1	594.1	578.4	578.3	1.0	1.1	-166.93	-3.5	71.5	72.4	70.2	2.14	33.840 CC		
600.0	600.0	584.3	584.2	1.0	1.2	-166.78	-3.7	71.4	72.4	70.2	2.16	33.496 ES		
700.0	700.0	684.4	684.2	1.2	1.4	-164.29	-7.4	69.5	73.2	70.7	2.53	28.900		
800.0	799.9	784.5	784.2	1.4	1.6	-161.80	-11.7	67.3	75.7	72.8	2.91	26.016		
900.0	899.7	884.4	883.9	1.6	1.8	-159.48	-16.5	64.8	79.7	76.5	3.29	24.268		
1,000.0	999.4	984.1	983.4	1.8	1.9	-158.03	-21.0	62.5	85.7	82.0	3.66	23.435		
1,100.0	1,098.9	1,083.7	1,083.0	2.0	2.1	-157.37	-25.3	60.4	93.4	89.4	4.03	23.183		
1,200.0	1,198.3	1,184.9	1,184.1	2.2	2.3	-157.45	-28.9	57.8	101.5	97.1	4.38	23.154		
1,300.0	1,297.7	1,286.7	1,285.8	2.5	2.5	-158.46	-30.3	53.6	107.8	103.1	4.73	22.776		
1,400.0	1,397.2	1,384.4	1,383.4	2.7	2.6	-160.27	-29.9	49.9	114.1	109.0	5.04	22.623 SF		
1,500.0	1,496.6	1,481.6	1,480.5	2.9	2.8	-162.80	-27.8	48.4	122.5	117.1	5.35	22.909		
1,600.0	1,596.0	1,582.4	1,581.3	3.2	2.9	-165.52	-24.6	47.8	132.0	126.3	5.66	23.305		
1,700.0	1,695.4	1,681.6	1,680.4	3.4	3.1	-167.32	-22.8	45.8	140.3	134.3	6.00	23.398		
1,800.0	1,794.8	1,777.3	1,776.1	3.7	3.3	-168.30	-22.5	45.6	150.7	144.4	6.34	23.783		
1,900.0	1,894.3	1,873.8	1,872.6	3.9	3.4	-168.64	-23.7	47.8	163.5	156.9	6.68	24.478		
2,000.0	1,993.7	1,974.5	1,973.3	4.2	3.6	-168.89	-25.1	50.2	176.5	169.4	7.03	25.097		
2,100.0	2,093.1	2,076.2	2,075.0	4.4	3.8	-169.25	-26.0	51.5	188.4	181.0	7.38	25.521		
2,200.0	2,192.5	2,177.9	2,176.7	4.7	3.9	-169.78	-26.2	51.4	198.8	191.1	7.73	25.735		
2,300.0	2,291.9	2,275.7	2,274.5	4.9	4.1	-170.52	-25.4	51.2	209.2	201.2	8.05	25.976		
2,400.0	2,391.3	2,373.4	2,372.1	5.2	4.2	-171.50	-23.4	51.7	220.5	212.1	8.38	26.303		
2,500.0	2,490.8	2,474.0	2,472.7	5.4	4.4	-172.63	-20.5	52.4	231.9	223.2	8.71	26.615		
2,600.0	2,590.2	2,571.7	2,570.4	5.7	4.6	-173.66	-17.4	52.6	243.0	234.0	9.05	26.859		
2,700.0	2,689.6	2,663.4	2,662.0	6.0	4.7	-174.15	-16.2	54.9	256.4	247.0	9.38	27.330		
2,800.0	2,789.0	2,761.1	2,759.6	6.2	4.9	-174.21	-16.6	59.6	271.8	262.1	9.72	27.951		
2,900.0	2,888.4	2,862.4	2,860.8	6.5	5.0	-174.31	-16.9	63.9	286.6	276.6	10.07	28.451		
3,000.0	2,987.8	2,963.9	2,962.2	6.7	5.2	-174.50	-16.7	67.2	300.6	290.2	10.42	28.849		
3,100.0	3,087.3	3,065.6	3,063.9	7.0	5.4	-174.82	-15.8	69.6	313.8	303.0	10.77	29.145		
3,200.0	3,186.7	3,167.4	3,165.7	7.2	5.6	-175.24	-14.3	71.1	326.1	315.0	11.11	29.351		
3,300.0	3,286.1	3,267.9	3,266.2	7.5	5.7	-175.62	-12.8	72.1	337.9	326.5	11.46	29.489		
3,400.0	3,385.5	3,368.5	3,366.8	7.7	5.9	-175.87	-12.1	72.7	349.3	337.5	11.81	29.586		
3,500.0	3,484.9	3,469.3	3,467.5	8.0	6.1	-176.00	-12.0	73.0	360.4	348.2	12.16	29.644		
3,600.0	3,584.4	3,569.2	3,567.4	8.2	6.3	-176.04	-12.5	73.1	371.2	358.7	12.51	29.676		
3,700.0	3,683.8	3,669.0	3,667.3	8.5	6.4	-176.01	-13.4	73.1	381.9	369.0	12.86	29.697		
3,800.0	3,783.2	3,768.8	3,767.1	8.8	6.6	-175.93	-14.7	73.1	392.4	379.2	13.21	29.708		
3,900.0	3,882.6	3,868.7	3,867.0	9.0	6.8	-175.82	-16.3	72.9	402.9	389.3	13.56	29.708		
4,000.0	3,982.0	3,968.6	3,966.9	9.3	7.0	-175.68	-18.1	72.7	413.2	399.3	13.91	29.699		
4,100.0	4,081.4	4,068.5	4,066.8	9.5	7.1	-175.54	-20.0	72.5	423.5	409.2	14.27	29.683		
4,200.0	4,180.9	4,168.5	4,166.7	9.8	7.3	-175.40	-22.0	72.0	433.6	419.0	14.62	29.664		
4,300.0	4,280.3	4,268.6	4,266.8	10.0	7.5	-175.33	-23.4	71.5	443.7	428.7	14.97	29.642		
4,400.0	4,379.7	4,368.7	4,366.8	10.3	7.7	-175.32	-24.4	70.7	453.6	438.2	15.32	29.613		
4,500.0	4,479.1	4,468.7	4,466.9	10.6	7.8	-175.38	-24.9	69.8	463.3	447.7	15.66	29.578		
4,600.0	4,578.5	4,552.3	4,550.5	10.8	8.0	-175.45	-25.2	69.4	473.7	457.8	15.98	29.637		
4,700.0	4,678.0	4,620.0	4,618.0	11.1	8.1	-175.55	-24.5	73.3	490.2	473.9	16.27	30.118		

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 Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - WANDELL 1 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 7911-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		
13,400.0	7,270.0	7,200.0	7,200.0	112.3	12.6	90.00	6,569.1	-418.4	471.5	347.1	124.44	3.789	2.545 CC, ES, SF	
13,500.0	7,270.0	7,200.0	7,200.0	114.0	12.6	90.00	6,569.1	-418.4	406.5	280.3	126.18	3.222		
13,600.0	7,270.0	7,200.0	7,200.0	115.7	12.6	90.00	6,569.1	-418.4	358.1	230.1	127.93	2.799		
13,700.0	7,270.0	7,200.0	7,200.0	117.5	12.6	90.00	6,569.1	-418.4	333.4	203.7	129.67	2.571		
13,735.3	7,270.0	7,200.0	7,200.0	118.1	12.6	90.00	6,569.1	-418.4	331.5	201.2	130.29	2.545		
13,800.0	7,270.0	7,200.0	7,200.0	119.2	12.6	90.00	6,569.1	-418.4	337.8	206.4	131.42	2.570		
13,900.0	7,270.0	7,200.0	7,200.0	121.0	12.6	90.00	6,569.1	-418.4	370.2	237.0	133.16	2.780		
14,000.0	7,270.0	7,200.0	7,200.0	122.7	12.6	90.00	6,569.1	-418.4	424.3	289.4	134.91	3.145		
14,100.0	7,270.0	7,200.0	7,200.0	124.4	12.6	90.00	6,569.1	-418.4	492.9	356.2	136.65	3.607		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design													S18-T2N-R67W - WANDELL 43-7 (EXISTING) - ENCANA WELL - PLAN ONLY		Offset Site Error:		0.0 ft
Survey Program:													0-Geolink MWD		Offset Well Error:		0.0 ft
Offset				Semi Major Axis			Distance										
Reference		Offset		Reference		Offset	Highside	Offset Wellbore Centre		Between	Between	Total	Separation	Warning			
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset	Between	Between	Total	Separation	Warning					
Depth	Depth	Depth	Depth	Reference	Offset	Highside	Offset	Between	Between	Total	Separation	Warning					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	Toolface	+N/-S	+E/-W	Centres	Ellipses	Uncertainty	Factor					
						(°)	(ft)	(ft)	(ft)	(ft)	Axis						
11,400.0	7,270.0	7,380.8	7,116.5	77.7	33.1	79.42	4,258.4	-214.7	483.4	381.9	101.53	4.761					
11,437.0	7,270.0	7,371.4	7,107.5	78.3	33.0	78.33	4,260.6	-216.5	482.1	380.3	101.77	4.737 CC, ES, SF					
11,500.0	7,270.0	7,355.0	7,091.9	79.4	32.9	76.43	4,264.3	-219.8	485.9	383.8	102.07	4.761					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - WANDELL 6-0-7 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 75-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance								
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)				
14,200.0	7,270.0	7,295.2	7,202.6	126.2	20.2	-94.73	7,517.0	-790.3	495.4	350.1	145.29	3.410		
14,288.6	7,270.0	7,295.1	7,202.5	127.7	20.2	-93.74	7,517.0	-790.3	406.8	259.8	147.02	2.767	CC, ES, SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - WANDELL 6-4-7 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 75-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		
11,500.0	7,270.0	7,591.4	7,202.7	79.4	35.8	-90.65	4,740.2	-748.1	420.9	306.8	114.13	3.688		
11,600.0	7,270.0	7,591.2	7,202.5	81.1	35.8	-90.47	4,740.2	-748.1	322.2	206.4	115.87	2.781		
11,700.0	7,270.0	7,591.0	7,202.3	82.8	35.8	-90.28	4,740.2	-748.1	224.7	107.1	117.60	1.911		
11,800.0	7,270.0	7,590.8	7,202.1	84.5	35.8	-90.09	4,740.2	-748.1	131.0	11.6	119.34	1.098	Level 2	
11,900.0	7,270.0	7,590.7	7,201.9	86.3	35.8	-89.91	4,740.2	-748.1	61.5	-59.6	121.15	0.508	Level 1	
11,917.4	7,270.0	7,590.6	7,201.9	86.6	35.8	-89.88	4,740.2	-748.1	59.0	-62.4	121.48	0.486	Level 1, CC, ES, SF	
12,000.0	7,270.0	7,590.5	7,201.7	88.0	35.8	-89.73	4,740.2	-748.1	101.2	-21.8	123.01	0.822	Level 1	
12,100.0	7,270.0	7,590.3	7,201.5	89.7	35.8	-89.56	4,740.2	-748.1	191.1	66.3	124.78	1.531		
12,200.0	7,270.0	7,590.1	7,201.3	91.4	35.8	-89.38	4,740.2	-748.1	287.7	161.2	126.51	2.274		
12,300.0	7,270.0	7,589.9	7,201.2	93.2	35.8	-89.21	4,740.2	-748.1	386.0	257.8	128.25	3.010		
12,400.0	7,270.0	7,589.7	7,201.0	94.9	35.8	-89.03	4,740.2	-748.1	485.1	355.1	129.98	3.732		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - WANDELL 6-8-7 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 78-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
9,000.0	7,270.0	7,369.4	7,249.9	37.8	21.0	-88.79	2,294.9	-785.8	481.3	429.2	52.14	9.232		
9,100.0	7,270.0	7,369.8	7,250.4	39.4	21.0	-89.05	2,294.9	-785.8	383.9	330.1	53.79	7.137		
9,200.0	7,270.0	7,370.2	7,250.8	41.0	21.0	-89.30	2,294.9	-785.8	288.3	232.8	55.46	5.198		
9,300.0	7,270.0	7,370.7	7,251.2	42.6	21.0	-89.55	2,294.9	-785.8	197.0	139.9	57.13	3.449		
9,400.0	7,270.0	7,371.1	7,251.7	44.2	21.0	-89.80	2,294.9	-785.8	120.6	61.8	58.81	2.050		
9,471.4	7,270.0	7,371.4	7,252.0	45.3	21.0	-89.98	2,294.9	-785.8	97.2	37.2	60.01	1.619	CC, ES, SF	
9,500.0	7,270.0	7,371.5	7,252.1	45.8	21.0	-90.06	2,294.9	-785.8	101.3	40.8	60.49	1.675		
9,600.0	7,270.0	7,371.9	7,252.5	47.4	21.0	-90.31	2,295.0	-785.8	161.2	99.0	62.18	2.593		
9,700.0	7,270.0	7,372.4	7,252.9	49.1	21.0	-90.56	2,295.0	-785.8	248.4	184.5	63.87	3.889		
9,800.0	7,270.0	7,372.8	7,253.4	50.7	21.0	-90.81	2,295.0	-785.8	342.7	277.1	65.57	5.226		
9,900.0	7,270.0	7,373.2	7,253.8	52.4	21.0	-91.06	2,295.0	-785.8	439.5	372.2	67.26	6.534		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - WANDELL 8-2-7 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8111-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		
13,400.0	7,270.0	7,202.0	7,202.0	112.3	12.6	90.00	6,650.0	-559.0	463.3	338.9	124.44	3.723		
13,500.0	7,270.0	7,202.0	7,202.0	114.0	12.6	90.00	6,650.0	-559.0	374.9	248.7	126.18	2.971		
13,600.0	7,270.0	7,202.0	7,202.0	115.7	12.6	90.00	6,650.0	-559.0	293.8	165.9	127.93	2.297		
13,700.0	7,270.0	7,202.0	7,202.0	117.5	12.6	90.00	6,650.0	-559.0	228.4	98.7	129.67	1.761		
13,800.0	7,270.0	7,202.0	7,202.0	119.2	12.6	90.00	6,650.0	-559.0	194.9	63.5	131.42	1.483 Level 3		
13,820.9	7,270.0	7,202.0	7,202.0	119.6	12.6	90.00	6,650.0	-559.0	193.8	62.0	131.78	1.470 Level 3, CC, ES, SF		
13,900.0	7,270.0	7,202.0	7,202.0	121.0	12.6	90.00	6,650.0	-559.0	209.3	76.1	133.16	1.572		
14,000.0	7,270.0	7,202.0	7,202.0	122.7	12.6	90.00	6,650.0	-559.0	263.9	129.0	134.91	1.956		
14,100.0	7,270.0	7,202.0	7,202.0	124.4	12.6	90.00	6,650.0	-559.0	339.8	203.1	136.66	2.486		
14,200.0	7,270.0	7,202.0	7,202.0	126.2	12.6	90.00	6,650.0	-559.0	425.8	287.4	138.40	3.076		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - WANDELL 8-4-7 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 7968-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		
13,400.0	7,270.0	7,203.0	7,203.0	112.3	12.6	90.00	6,629.9	-554.0	447.0	322.5	124.44	3.592		
13,500.0	7,270.0	7,203.0	7,203.0	114.0	12.6	90.00	6,629.9	-554.0	360.1	233.9	126.19	2.854		
13,600.0	7,270.0	7,203.0	7,203.0	115.7	12.6	90.00	6,629.9	-554.0	282.0	154.1	127.93	2.204		
13,700.0	7,270.0	7,203.0	7,203.0	117.5	12.6	90.00	6,629.9	-554.0	222.2	92.6	129.68	1.714		
13,800.0	7,270.0	7,203.0	7,203.0	119.2	12.6	90.00	6,629.9	-554.0	198.1	66.7	131.42	1.508		
13,800.7	7,270.0	7,203.0	7,203.0	119.2	12.6	90.00	6,629.9	-554.0	198.1	66.7	131.43	1.507 CC, ES, SF		
13,900.0	7,270.0	7,203.0	7,203.0	121.0	12.6	90.00	6,629.9	-554.0	221.6	88.5	133.17	1.664		
14,000.0	7,270.0	7,203.0	7,203.0	122.7	12.6	90.00	6,629.9	-554.0	281.0	146.1	134.91	2.083		
14,100.0	7,270.0	7,203.0	7,203.0	124.4	12.6	90.00	6,629.9	-554.0	358.9	222.3	136.66	2.627		
14,200.0	7,270.0	7,203.0	7,203.0	126.2	12.6	90.00	6,629.9	-554.0	445.8	307.4	138.40	3.221		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T2N-R67W - WANDELL E UNIT 1 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 7979-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			
10,000.0	7,270.0	7,225.0	7,225.0	54.0	12.6	90.00	3,191.1	-405.3	464.0	398.8	65.27	7.110		
10,100.0	7,270.0	7,225.0	7,225.0	55.7	12.6	90.00	3,191.1	-405.3	389.6	322.7	66.97	5.818		
10,200.0	7,270.0	7,225.0	7,225.0	57.4	12.6	90.00	3,191.1	-405.3	329.1	260.4	68.68	4.792		
10,300.0	7,270.0	7,225.0	7,225.0	59.0	12.6	90.00	3,191.1	-405.3	291.2	220.8	70.39	4.137		
10,367.6	7,270.0	7,225.0	7,225.0	60.2	12.6	90.00	3,191.1	-405.3	283.3	211.7	71.55	3.959 CC, ES		
10,400.0	7,270.0	7,225.0	7,225.0	60.7	12.6	90.00	3,191.1	-405.3	285.1	213.0	72.11	3.954 SF		
10,500.0	7,270.0	7,225.0	7,225.0	62.4	12.6	90.00	3,191.1	-405.3	312.7	238.9	73.83	4.236		
10,600.0	7,270.0	7,225.0	7,225.0	64.1	12.6	90.00	3,191.1	-405.3	366.4	290.9	75.54	4.850		
10,700.0	7,270.0	7,225.0	7,225.0	65.8	12.6	90.00	3,191.1	-405.3	436.8	359.5	77.26	5.653		

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 Kugel 1D-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4960.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4960.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1D-18H-H267	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 #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4960.0ft (Original Well Elev)

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Kugel 1D-18H-H267

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.37°

