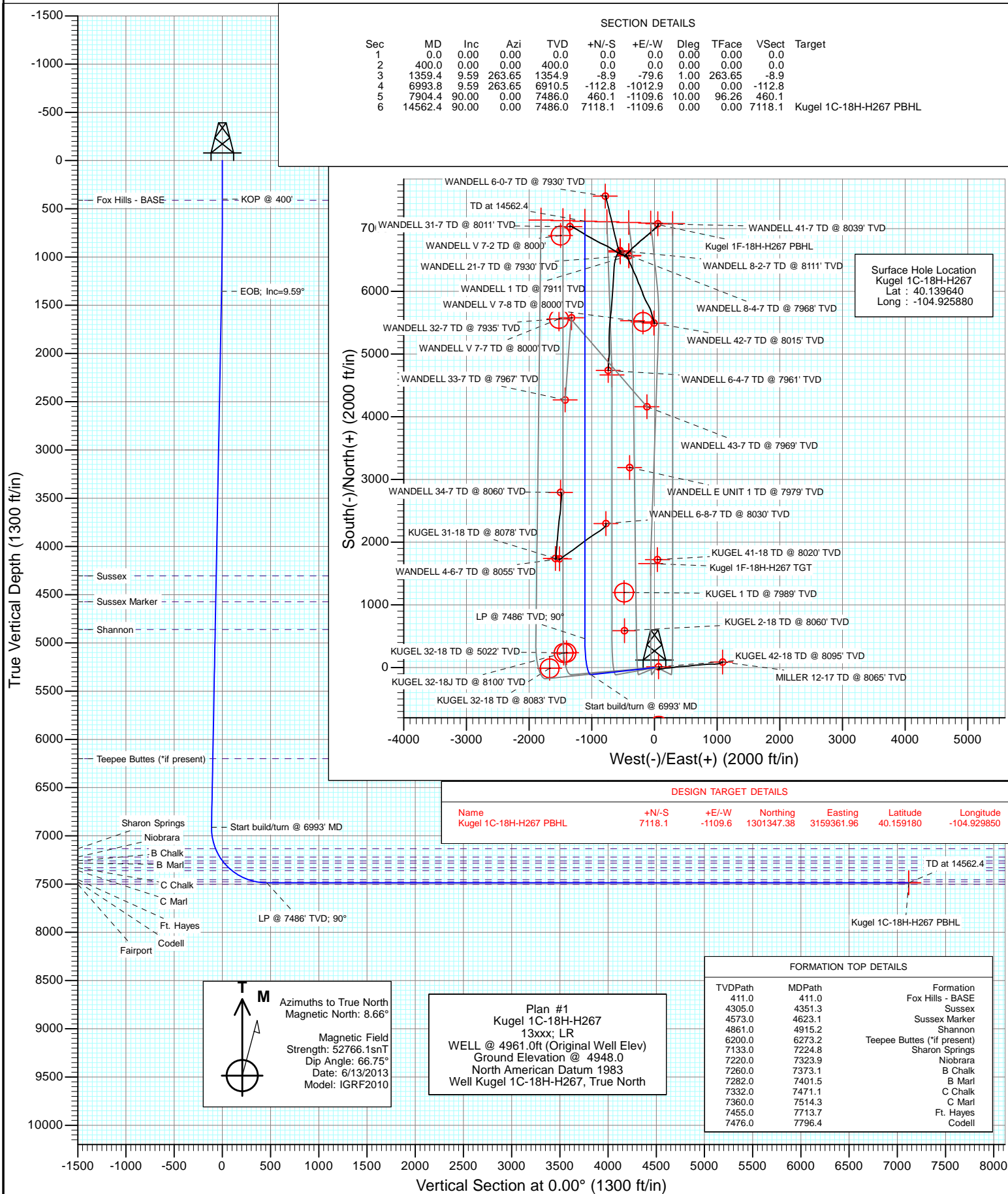




Project: DJ Wattenberg
Site: S18-T2N-R67W
Well: Kugel 1C-18H-H267
Wellbore: Hz
Design: Plan #1



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site:	S18-T2N-R67W	North Reference:	True
Well:	Kugel 1C-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 1C-18H-H267					
Well Position	+N/-S	0.0 ft	Northing:	1,294,236.61 ft	Latitude:	40.139640
	+E/-W	0.0 ft	Easting:	3,160,517.64 ft	Longitude:	-104.925880
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,948.0 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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,359.4	9.59	263.65	1,354.9	-8.9	-79.6	1.00	1.00	0.00	263.65	
6,993.8	9.59	263.65	6,910.5	-112.8	-1,012.9	0.00	0.00	0.00	0.00	
7,904.4	90.00	0.00	7,486.0	460.1	-1,109.6	10.00	8.83	10.58	96.26	
14,562.4	90.00	0.00	7,486.0	7,118.1	-1,109.6	0.00	0.00	0.00	0.00	Kugel 1C-18H-H267 F

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site:	S18-T2N-R67W	North Reference:	True
Well:	Kugel 1C-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	KOP @ 400'
411.0	0.11	263.65	411.0	0.0	0.0	0.0	1.00	1.00	Fox Hills - BASE
500.0	1.00	263.65	500.0	-0.1	-0.9	-0.1	1.00	1.00	
600.0	2.00	263.65	600.0	-0.4	-3.5	-0.4	1.00	1.00	
700.0	3.00	263.65	699.9	-0.9	-7.8	-0.9	1.00	1.00	
800.0	4.00	263.65	799.7	-1.5	-13.9	-1.5	1.00	1.00	
900.0	5.00	263.65	899.4	-2.4	-21.7	-2.4	1.00	1.00	
1,000.0	6.00	263.65	998.9	-3.5	-31.2	-3.5	1.00	1.00	
1,100.0	7.00	263.65	1,098.3	-4.7	-42.4	-4.7	1.00	1.00	
1,200.0	8.00	263.65	1,197.4	-6.2	-55.4	-6.2	1.00	1.00	
1,300.0	9.00	263.65	1,296.3	-7.8	-70.1	-7.8	1.00	1.00	
1,359.4	9.59	263.65	1,354.9	-8.9	-79.6	-8.9	1.00	1.00	EOB; Inc=9.59°
1,400.0	9.59	263.65	1,395.0	-9.6	-86.4	-9.6	0.00	0.00	
1,500.0	9.59	263.65	1,493.6	-11.5	-102.9	-11.5	0.00	0.00	
1,600.0	9.59	263.65	1,592.2	-13.3	-119.5	-13.3	0.00	0.00	
1,700.0	9.59	263.65	1,690.8	-15.1	-136.1	-15.1	0.00	0.00	
1,800.0	9.59	263.65	1,789.4	-17.0	-152.6	-17.0	0.00	0.00	
1,900.0	9.59	263.65	1,888.0	-18.8	-169.2	-18.8	0.00	0.00	
2,000.0	9.59	263.65	1,986.6	-20.7	-185.8	-20.7	0.00	0.00	
2,100.0	9.59	263.65	2,085.2	-22.5	-202.3	-22.5	0.00	0.00	
2,200.0	9.59	263.65	2,183.8	-24.4	-218.9	-24.4	0.00	0.00	
2,300.0	9.59	263.65	2,282.4	-26.2	-235.4	-26.2	0.00	0.00	
2,400.0	9.59	263.65	2,381.0	-28.1	-252.0	-28.1	0.00	0.00	
2,500.0	9.59	263.65	2,479.6	-29.9	-268.6	-29.9	0.00	0.00	
2,600.0	9.59	263.65	2,578.2	-31.7	-285.1	-31.7	0.00	0.00	
2,700.0	9.59	263.65	2,676.8	-33.6	-301.7	-33.6	0.00	0.00	
2,800.0	9.59	263.65	2,775.4	-35.4	-318.3	-35.4	0.00	0.00	
2,900.0	9.59	263.65	2,874.0	-37.3	-334.8	-37.3	0.00	0.00	
3,000.0	9.59	263.65	2,972.6	-39.1	-351.4	-39.1	0.00	0.00	
3,100.0	9.59	263.65	3,071.2	-41.0	-368.0	-41.0	0.00	0.00	
3,200.0	9.59	263.65	3,169.8	-42.8	-384.5	-42.8	0.00	0.00	
3,300.0	9.59	263.65	3,268.4	-44.6	-401.1	-44.6	0.00	0.00	
3,400.0	9.59	263.65	3,367.0	-46.5	-417.7	-46.5	0.00	0.00	
3,500.0	9.59	263.65	3,465.6	-48.3	-434.2	-48.3	0.00	0.00	
3,600.0	9.59	263.65	3,564.2	-50.2	-450.8	-50.2	0.00	0.00	
3,700.0	9.59	263.65	3,662.8	-52.0	-467.3	-52.0	0.00	0.00	
3,800.0	9.59	263.65	3,761.4	-53.9	-483.9	-53.9	0.00	0.00	
3,900.0	9.59	263.65	3,860.0	-55.7	-500.5	-55.7	0.00	0.00	
4,000.0	9.59	263.65	3,958.6	-57.6	-517.0	-57.6	0.00	0.00	
4,100.0	9.59	263.65	4,057.2	-59.4	-533.6	-59.4	0.00	0.00	
4,200.0	9.59	263.65	4,155.8	-61.2	-550.2	-61.2	0.00	0.00	
4,300.0	9.59	263.65	4,254.4	-63.1	-566.7	-63.1	0.00	0.00	
4,351.3	9.59	263.65	4,305.0	-64.0	-575.2	-64.0	0.00	0.00	Sussex
4,400.0	9.59	263.65	4,353.0	-64.9	-583.3	-64.9	0.00	0.00	
4,500.0	9.59	263.65	4,451.6	-66.8	-599.9	-66.8	0.00	0.00	
4,600.0	9.59	263.65	4,550.2	-68.6	-616.4	-68.6	0.00	0.00	
4,623.1	9.59	263.65	4,573.0	-69.0	-620.3	-69.0	0.00	0.00	Sussex Marker
4,700.0	9.59	263.65	4,648.8	-70.5	-633.0	-70.5	0.00	0.00	

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site:	S18-T2N-R67W	North Reference:	True
Well:	Kugel 1C-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	9.59	263.65	4,747.4	-72.3	-649.6	-72.3	0.00	0.00	
4,900.0	9.59	263.65	4,846.0	-74.2	-666.1	-74.2	0.00	0.00	
4,915.2	9.59	263.65	4,861.0	-74.4	-668.6	-74.4	0.00	0.00	Shannon
5,000.0	9.59	263.65	4,944.6	-76.0	-682.7	-76.0	0.00	0.00	
5,100.0	9.59	263.65	5,043.2	-77.8	-699.2	-77.8	0.00	0.00	
5,200.0	9.59	263.65	5,141.8	-79.7	-715.8	-79.7	0.00	0.00	
5,300.0	9.59	263.65	5,240.4	-81.5	-732.4	-81.5	0.00	0.00	
5,400.0	9.59	263.65	5,339.0	-83.4	-748.9	-83.4	0.00	0.00	
5,500.0	9.59	263.65	5,437.6	-85.2	-765.5	-85.2	0.00	0.00	
5,600.0	9.59	263.65	5,536.2	-87.1	-782.1	-87.1	0.00	0.00	
5,700.0	9.59	263.65	5,634.8	-88.9	-798.6	-88.9	0.00	0.00	
5,800.0	9.59	263.65	5,733.4	-90.7	-815.2	-90.7	0.00	0.00	
5,900.0	9.59	263.65	5,832.0	-92.6	-831.8	-92.6	0.00	0.00	
6,000.0	9.59	263.65	5,930.6	-94.4	-848.3	-94.4	0.00	0.00	
6,100.0	9.59	263.65	6,029.2	-96.3	-864.9	-96.3	0.00	0.00	
6,200.0	9.59	263.65	6,127.8	-98.1	-881.5	-98.1	0.00	0.00	
6,273.2	9.59	263.65	6,200.0	-99.5	-893.6	-99.5	0.00	0.00	Teepee Buttes (*if present)
6,300.0	9.59	263.65	6,226.4	-100.0	-898.0	-100.0	0.00	0.00	
6,400.0	9.59	263.65	6,325.0	-101.8	-914.6	-101.8	0.00	0.00	
6,500.0	9.59	263.65	6,423.6	-103.7	-931.1	-103.7	0.00	0.00	
6,600.0	9.59	263.65	6,522.2	-105.5	-947.7	-105.5	0.00	0.00	
6,700.0	9.59	263.65	6,620.8	-107.3	-964.3	-107.3	0.00	0.00	
6,800.0	9.59	263.65	6,719.4	-109.2	-980.8	-109.2	0.00	0.00	
6,900.0	9.59	263.65	6,818.0	-111.0	-997.4	-111.0	0.00	0.00	
6,993.8	9.59	263.65	6,910.5	-112.8	-1,012.9	-112.8	0.00	0.00	Start build/turn @ 6993' MD
7,000.0	9.55	267.35	6,916.6	-112.8	-1,014.0	-112.8	10.00	-0.77	
7,100.0	13.47	315.47	7,014.8	-104.9	-1,030.5	-104.9	10.00	3.93	
7,200.0	21.68	335.00	7,110.1	-79.8	-1,046.5	-79.8	10.00	8.21	
7,224.8	23.92	337.75	7,133.0	-71.0	-1,050.3	-71.0	10.00	9.04	Sharon Springs
7,300.0	30.93	343.72	7,199.7	-38.3	-1,061.5	-38.3	10.00	9.32	
7,323.9	33.20	345.13	7,220.0	-26.0	-1,064.9	-26.0	10.00	9.50	Niobrara
7,373.1	37.91	347.54	7,260.0	1.7	-1,071.6	1.7	10.00	9.58	B Chalk
7,400.0	40.51	348.66	7,280.8	18.4	-1,075.1	18.4	10.00	9.65	
7,401.5	40.66	348.72	7,282.0	19.4	-1,075.3	19.4	10.00	9.67	B Marl
7,471.1	47.42	351.12	7,332.0	67.0	-1,083.7	67.0	10.00	9.71	C Chalk
7,500.0	50.23	351.96	7,351.0	88.5	-1,086.9	88.5	10.00	9.75	
7,514.3	51.63	352.36	7,360.0	99.4	-1,088.4	99.4	10.00	9.77	C Marl
7,600.0	60.03	354.44	7,408.1	169.8	-1,096.5	169.8	10.00	9.80	
7,700.0	69.86	356.47	7,450.4	260.0	-1,103.6	260.0	10.00	9.83	
7,713.7	71.21	356.72	7,455.0	272.9	-1,104.4	272.9	10.00	9.84	Ft. Hayes
7,796.4	79.36	358.19	7,476.0	352.8	-1,107.9	352.8	10.00	9.85	Codell
7,800.0	79.71	358.25	7,476.6	356.3	-1,108.0	356.3	10.00	9.86	
7,900.0	89.57	359.93	7,486.0	455.7	-1,109.6	455.7	10.00	9.86	
7,904.4	90.00	0.00	7,486.0	460.1	-1,109.6	460.1	10.00	9.86	LP @ 7486' TVD; 90°
8,000.0	90.00	0.00	7,486.0	555.7	-1,109.6	555.7	0.00	0.00	
8,100.0	90.00	0.00	7,486.0	655.7	-1,109.6	655.7	0.00	0.00	
8,200.0	90.00	0.00	7,486.0	755.7	-1,109.6	755.7	0.00	0.00	
8,300.0	90.00	0.00	7,486.0	855.7	-1,109.6	855.7	0.00	0.00	
8,400.0	90.00	0.00	7,486.0	955.7	-1,109.6	955.7	0.00	0.00	
8,500.0	90.00	0.00	7,486.0	1,055.7	-1,109.6	1,055.7	0.00	0.00	
8,600.0	90.00	0.00	7,486.0	1,155.7	-1,109.6	1,155.7	0.00	0.00	
8,700.0	90.00	0.00	7,486.0	1,255.7	-1,109.6	1,255.7	0.00	0.00	

Planning Report

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Project:	DJ Wattenberg	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site:	S18-T2N-R67W	North Reference:	True
Well:	Kugel 1C-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
8,800.0	90.00	0.00	7,486.0	1,355.7	-1,109.6	1,355.7	0.00	0.00	
8,900.0	90.00	0.00	7,486.0	1,455.7	-1,109.6	1,455.7	0.00	0.00	
9,000.0	90.00	0.00	7,486.0	1,555.7	-1,109.6	1,555.7	0.00	0.00	
9,100.0	90.00	0.00	7,486.0	1,655.7	-1,109.6	1,655.7	0.00	0.00	
9,200.0	90.00	0.00	7,486.0	1,755.7	-1,109.6	1,755.7	0.00	0.00	
9,300.0	90.00	0.00	7,486.0	1,855.7	-1,109.6	1,855.7	0.00	0.00	
9,400.0	90.00	0.00	7,486.0	1,955.7	-1,109.6	1,955.7	0.00	0.00	
9,500.0	90.00	0.00	7,486.0	2,055.7	-1,109.6	2,055.7	0.00	0.00	
9,600.0	90.00	0.00	7,486.0	2,155.7	-1,109.6	2,155.7	0.00	0.00	
9,700.0	90.00	0.00	7,486.0	2,255.7	-1,109.6	2,255.7	0.00	0.00	
9,800.0	90.00	0.00	7,486.0	2,355.7	-1,109.6	2,355.7	0.00	0.00	
9,900.0	90.00	0.00	7,486.0	2,455.7	-1,109.6	2,455.7	0.00	0.00	
10,000.0	90.00	0.00	7,486.0	2,555.7	-1,109.6	2,555.7	0.00	0.00	
10,100.0	90.00	0.00	7,486.0	2,655.7	-1,109.6	2,655.7	0.00	0.00	
10,200.0	90.00	0.00	7,486.0	2,755.7	-1,109.6	2,755.7	0.00	0.00	
10,300.0	90.00	0.00	7,486.0	2,855.7	-1,109.6	2,855.7	0.00	0.00	
10,400.0	90.00	0.00	7,486.0	2,955.7	-1,109.6	2,955.7	0.00	0.00	
10,500.0	90.00	0.00	7,486.0	3,055.7	-1,109.6	3,055.7	0.00	0.00	
10,600.0	90.00	0.00	7,486.0	3,155.7	-1,109.6	3,155.7	0.00	0.00	
10,700.0	90.00	0.00	7,486.0	3,255.7	-1,109.6	3,255.7	0.00	0.00	
10,800.0	90.00	0.00	7,486.0	3,355.7	-1,109.6	3,355.7	0.00	0.00	
10,900.0	90.00	0.00	7,486.0	3,455.7	-1,109.6	3,455.7	0.00	0.00	
11,000.0	90.00	0.00	7,486.0	3,555.7	-1,109.6	3,555.7	0.00	0.00	
11,100.0	90.00	0.00	7,486.0	3,655.7	-1,109.6	3,655.7	0.00	0.00	
11,200.0	90.00	0.00	7,486.0	3,755.7	-1,109.6	3,755.7	0.00	0.00	
11,300.0	90.00	0.00	7,486.0	3,855.7	-1,109.6	3,855.7	0.00	0.00	
11,400.0	90.00	0.00	7,486.0	3,955.7	-1,109.6	3,955.7	0.00	0.00	
11,500.0	90.00	0.00	7,486.0	4,055.7	-1,109.6	4,055.7	0.00	0.00	
11,600.0	90.00	0.00	7,486.0	4,155.7	-1,109.6	4,155.7	0.00	0.00	
11,700.0	90.00	0.00	7,486.0	4,255.7	-1,109.6	4,255.7	0.00	0.00	
11,800.0	90.00	0.00	7,486.0	4,355.7	-1,109.6	4,355.7	0.00	0.00	
11,900.0	90.00	0.00	7,486.0	4,455.7	-1,109.6	4,455.7	0.00	0.00	
12,000.0	90.00	0.00	7,486.0	4,555.7	-1,109.6	4,555.7	0.00	0.00	
12,100.0	90.00	0.00	7,486.0	4,655.7	-1,109.6	4,655.7	0.00	0.00	
12,200.0	90.00	0.00	7,486.0	4,755.7	-1,109.6	4,755.7	0.00	0.00	
12,300.0	90.00	0.00	7,486.0	4,855.7	-1,109.6	4,855.7	0.00	0.00	
12,400.0	90.00	0.00	7,486.0	4,955.7	-1,109.6	4,955.7	0.00	0.00	
12,500.0	90.00	0.00	7,486.0	5,055.7	-1,109.6	5,055.7	0.00	0.00	
12,600.0	90.00	0.00	7,486.0	5,155.7	-1,109.6	5,155.7	0.00	0.00	
12,700.0	90.00	0.00	7,486.0	5,255.7	-1,109.6	5,255.7	0.00	0.00	
12,800.0	90.00	0.00	7,486.0	5,355.7	-1,109.6	5,355.7	0.00	0.00	
12,900.0	90.00	0.00	7,486.0	5,455.7	-1,109.6	5,455.7	0.00	0.00	
13,000.0	90.00	0.00	7,486.0	5,555.7	-1,109.6	5,555.7	0.00	0.00	
13,100.0	90.00	0.00	7,486.0	5,655.7	-1,109.6	5,655.7	0.00	0.00	
13,200.0	90.00	0.00	7,486.0	5,755.7	-1,109.6	5,755.7	0.00	0.00	
13,300.0	90.00	0.00	7,486.0	5,855.7	-1,109.6	5,855.7	0.00	0.00	
13,400.0	90.00	0.00	7,486.0	5,955.7	-1,109.6	5,955.7	0.00	0.00	
13,500.0	90.00	0.00	7,486.0	6,055.7	-1,109.6	6,055.7	0.00	0.00	
13,600.0	90.00	0.00	7,486.0	6,155.7	-1,109.6	6,155.7	0.00	0.00	
13,700.0	90.00	0.00	7,486.0	6,255.7	-1,109.6	6,255.7	0.00	0.00	
13,800.0	90.00	0.00	7,486.0	6,355.7	-1,109.6	6,355.7	0.00	0.00	
13,900.0	90.00	0.00	7,486.0	6,455.7	-1,109.6	6,455.7	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site:	S18-T2N-R67W	North Reference:	True
Well:	Kugel 1C-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
14,000.0	90.00	0.00	7,486.0	6,555.7	-1,109.6	6,555.7	0.00	0.00	
14,100.0	90.00	0.00	7,486.0	6,655.7	-1,109.6	6,655.7	0.00	0.00	
14,200.0	90.00	0.00	7,486.0	6,755.7	-1,109.6	6,755.7	0.00	0.00	
14,300.0	90.00	0.00	7,486.0	6,855.7	-1,109.6	6,855.7	0.00	0.00	
14,400.0	90.00	0.00	7,486.0	6,955.7	-1,109.6	6,955.7	0.00	0.00	
14,500.0	90.00	0.00	7,486.0	7,055.7	-1,109.6	7,055.7	0.00	0.00	
14,562.4	90.00	0.00	7,486.0	7,118.1	-1,109.6	7,118.1	0.00	0.00	TD at 14562.4

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 1C-18H-H267 PBI - plan hits target center - Point	0.00	0.00	7,486.0	7,118.1	-1,109.6	1,301,347.38	3,159,361.96	40.159180	-104.929850

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
411.0	411.0	Fox Hills - BASE			
4,351.3	4,305.0	Sussex			
4,623.1	4,573.0	Sussex Marker			
4,915.2	4,861.0	Shannon			
6,273.2	6,200.0	Teepee Buttes (*if present)			
7,224.8	7,133.0	Sharon Springs			
7,323.9	7,220.0	Niobrara			
7,373.1	7,260.0	B Chalk			
7,401.5	7,282.0	B Marl			
7,471.1	7,332.0	C Chalk			
7,514.3	7,360.0	C Marl			
7,713.7	7,455.0	Ft. Hayes			
7,796.4	7,476.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
400.0	400.0	0.0	0.0	KOP @ 400'
1,359.4	1,354.9	-8.9	-79.6	EOB; Inc=9.59°
6,993.8	6,910.5	-112.8	-1,012.9	Start build/turn @ 6993' MD
7,904.4	7,486.0	460.1	-1,109.6	LP @ 7486' TVD; 90°
14,562.4	7,486.0	7,118.1	-1,109.6	TD at 14562.4

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S18-T2N-R67W

Kugel 1C-18H-H267

Hz

Plan #1

Anticollision Report

17 June, 2013

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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	14,562.4	Plan #1 (Hz)	Geolink MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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						Out of range
Kugel 1A-18H-H267 - Hz - Plan #1	200.0	200.0	19.6	18.9	29.982	CC, ES
Kugel 1A-18H-H267 - Hz - Plan #1	1,400.0	1,391.7	57.3	52.5	11.895	SF
Kugel 1B-18H-H267 - Hz - Plan #1	300.0	300.0	8.4	7.4	8.372	CC, ES
Kugel 1B-18H-H267 - Hz - Plan #1	14,562.4	14,376.0	433.1	225.8	2.089	SF
Kugel 1D-18H-H267 - Hz - Plan #1	400.0	399.0	11.2	9.8	8.289	CC, ES
Kugel 1D-18H-H267 - Hz - Plan #1	14,562.4	14,293.1	412.7	194.5	1.891	SF
Kugel 1E-18H-H267 - Hz - Plan #1	400.0	399.0	19.6	18.2	14.506	CC, ES
Kugel 1E-18H-H267 - Hz - Plan #1	1,000.0	1,000.6	37.4	34.0	10.871	SF
Kugel 1F-18H-H267 - Hz - Plan #1	400.0	399.0	30.8	29.4	22.795	CC, ES
Kugel 1F-18H-H267 - Hz - Plan #1	700.0	698.9	38.6	36.2	16.107	SF
Kugel 1G-18H-H267 - Hz - Plan #1	400.0	399.0	41.9	40.6	31.084	CC, ES
Kugel 1G-18H-H267 - Hz - Plan #1	700.0	697.3	52.8	50.4	22.078	SF
KUGEL 2-18 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
KUGEL 31-18 (EXISTING) - ENCANA WELL - NO SURV	9,185.6	7,464.0	469.9	422.2	9.845	CC
KUGEL 31-18 (EXISTING) - ENCANA WELL - NO SURV	9,200.0	7,464.0	470.1	422.2	9.802	ES
KUGEL 31-18 (EXISTING) - ENCANA WELL - NO SURV	9,300.0	7,464.0	483.6	434.0	9.750	SF
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	7,694.7	7,454.6	345.6	317.9	12.481	CC, ES
KUGEL 32-18J (EXISTING) - MACHII-ROSS WELL - NO	7,700.0	7,456.4	345.6	317.9	12.465	SF
KUGEL 41-18 (EXISTING) - ENCANA WELL - ENCANA						Out of range
KUGEL 42-18 (EXISTING) - ENCANA WELL - NO SURV	400.0	387.0	67.5	66.1	49.944	CC, ES
KUGEL 42-18 (EXISTING) - ENCANA WELL - NO SURV	1,000.0	985.9	98.8	95.4	28.765	SF
MILLER 12-17 (EXISTING) - ENCANA WELL - SURVEY	481.4	464.7	85.1	83.4	49.558	CC
MILLER 12-17 (EXISTING) - ENCANA WELL - SURVEY	500.0	483.3	85.1	83.3	47.658	ES
MILLER 12-17 (EXISTING) - ENCANA WELL - SURVEY	1,100.0	1,082.5	115.9	111.9	28.852	SF
WANDELL 1 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
WANDELL 21-7 (EXISTING) - ENCANA WELL - NO SUR						Out of range
WANDELL 31-7 (EXISTING) - ENCANA WELL - SURVE	14,477.7	7,535.0	241.9	100.7	1.713	CC, ES, SF
WANDELL 32-7 (EXISTING) - ENCANA WELL - NO SUR	13,022.6	7,417.0	211.7	98.3	1.868	CC, ES, SF
WANDELL 33-7 (EXISTING) - ENCANA WELL - PLAN O	11,713.1	7,632.5	314.0	210.2	3.025	CC, ES, SF
WANDELL 34-7 (EXISTING) - ENCANA WELL - SURVE	10,238.0	7,588.4	383.9	308.8	5.114	CC, ES
WANDELL 34-7 (EXISTING) - ENCANA WELL - SURVE	10,300.0	7,588.5	388.9	312.7	5.108	SF
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						Out of range
WANDELL 4-6-7 (EXISTING) - ENCANA WELL - NO SU	9,179.8	7,467.0	403.4	355.7	8.467	CC, ES
WANDELL 4-6-7 (EXISTING) - ENCANA WELL - NO SU	9,200.0	7,467.0	403.9	355.9	8.420	SF
WANDELL 6-0-7 (EXISTING) - ENCANA WELL - SURVE						Out of range
WANDELL 6-4-7 (EXISTING) - ENCANA WELL - SURVE	12,183.7	7,806.8	372.1	250.4	3.059	CC, ES
WANDELL 6-4-7 (EXISTING) - ENCANA WELL - SURVE	12,200.0	7,806.7	372.4	250.5	3.055	SF
WANDELL 6-8-7 (EXISTING) - ENCANA WELL - SURVE	9,740.2	7,586.3	335.0	274.5	5.536	CC, ES
WANDELL 6-8-7 (EXISTING) - ENCANA WELL - SURVE	9,800.0	7,586.7	340.3	278.8	5.532	SF
WANDELL 8-2-7 (EXISTING) - ENCANA WELL - NO SU						Out of range
WANDELL 8-4-7 (EXISTING) - ENCANA WELL - NO SU						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 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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						
WANDELL E UNIT 1 (EXISTING) - ENCANA WELL - NO						Out of range
WANDELL V 7-2 (EXISTING) - GERRITY OIL WELL - NO	14,335.1	7,405.0	387.1	251.0	2.843	CC, ES, SF
WANDELL V 7-7 (EXISTING) - GERRITY OIL WELL - NO	13,005.5	7,404.0	412.4	299.4	3.649	CC, ES, SF
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 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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: 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	-89.95	0.0	-19.6	19.6					
100.0	100.0	100.0	100.0	0.2	0.2	-89.95	0.0	-19.6	19.6	19.3	0.30	64.443		
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-19.6	19.6	18.9	0.65	29.982 CC, ES		
300.0	300.0	299.7	299.6	0.5	0.5	-90.20	-0.1	-20.4	20.4	19.4	1.00	20.393		
400.0	400.0	399.2	399.2	0.7	0.7	-90.85	-0.3	-23.0	23.0	21.7	1.36	16.993		
500.0	500.0	498.8	498.6	0.9	0.9	4.85	-0.8	-27.3	26.5	24.8	1.70	15.604		
600.0	600.0	598.2	597.9	1.0	1.1	4.38	-1.4	-33.3	29.9	27.9	2.05	14.639		
700.0	699.9	697.6	697.0	1.2	1.3	4.03	-2.2	-41.0	33.4	31.0	2.39	13.953		
800.0	799.7	796.9	795.9	1.4	1.5	3.76	-3.2	-50.5	36.8	34.1	2.74	13.439		
900.0	899.4	896.2	894.5	1.6	1.8	3.56	-4.3	-61.6	40.3	37.2	3.09	13.038		
1,000.0	998.9	995.4	992.9	1.8	2.0	3.41	-5.7	-74.4	43.7	40.2	3.44	12.716		
1,100.0	1,098.3	1,094.6	1,090.9	2.1	2.3	3.29	-7.2	-88.9	47.1	43.3	3.78	12.451		
1,200.0	1,197.4	1,193.7	1,188.7	2.3	2.6	3.21	-8.9	-105.1	50.5	46.3	4.13	12.228		
1,300.0	1,296.3	1,292.7	1,286.1	2.6	3.0	3.15	-10.7	-122.9	53.8	49.4	4.47	12.037		
1,400.0	1,395.0	1,391.7	1,383.1	2.9	3.4	3.11	-12.7	-142.4	57.3	52.5	4.82	11.895 SF		
1,500.0	1,493.6	1,490.5	1,479.7	3.3	3.8	3.01	-14.9	-163.5	62.3	57.1	5.17	12.040		
1,600.0	1,592.2	1,589.2	1,575.6	3.6	4.2	2.86	-17.3	-186.3	68.9	63.4	5.52	12.479		
1,700.0	1,690.8	1,687.6	1,670.9	3.9	4.7	2.69	-19.8	-210.6	77.2	71.4	5.87	13.158		
1,800.0	1,789.4	1,785.7	1,765.5	4.2	5.1	2.52	-22.5	-236.4	87.3	81.1	6.22	14.038		
1,900.0	1,888.0	1,884.4	1,860.3	4.6	5.7	2.35	-25.3	-263.8	98.8	92.2	6.57	15.039		
2,000.0	1,986.6	1,983.7	1,955.6	4.9	6.2	2.21	-28.2	-291.5	110.4	103.5	6.92	15.959		
2,100.0	2,085.2	2,083.0	2,051.0	5.2	6.7	2.09	-31.1	-319.2	122.1	114.8	7.27	16.791		
2,200.0	2,183.8	2,182.3	2,146.3	5.5	7.2	2.00	-33.9	-346.9	133.7	126.1	7.62	17.547		
2,300.0	2,282.4	2,281.6	2,241.6	5.9	7.7	1.92	-36.8	-374.6	145.4	137.4	7.97	18.236		
2,400.0	2,381.0	2,381.0	2,337.0	6.2	8.2	1.86	-39.7	-402.3	157.0	148.7	8.32	18.868		
2,500.0	2,479.6	2,480.3	2,432.3	6.6	8.8	1.80	-42.6	-430.0	168.6	160.0	8.67	19.448		
2,600.0	2,578.2	2,579.6	2,527.6	6.9	9.3	1.75	-45.4	-457.7	180.3	171.3	9.02	19.984		
2,700.0	2,676.8	2,678.9	2,623.0	7.2	9.8	1.71	-48.3	-485.3	191.9	182.5	9.37	20.480		
2,800.0	2,775.4	2,778.2	2,718.3	7.6	10.3	1.67	-51.2	-513.0	203.6	193.8	9.72	20.940		
2,900.0	2,874.0	2,877.6	2,813.7	7.9	10.9	1.63	-54.1	-540.7	215.2	205.1	10.07	21.368		
3,000.0	2,972.6	2,976.9	2,909.0	8.2	11.4	1.60	-56.9	-568.4	226.8	216.4	10.42	21.768		
3,100.0	3,071.2	3,076.2	3,004.3	8.6	11.9	1.58	-59.8	-596.1	238.5	227.7	10.77	22.141		
3,200.0	3,169.8	3,175.5	3,099.7	8.9	12.5	1.55	-62.7	-623.8	250.1	239.0	11.12	22.491		
3,300.0	3,268.4	3,274.8	3,195.0	9.3	13.0	1.53	-65.6	-651.5	261.8	250.3	11.47	22.820		
3,400.0	3,367.0	3,374.2	3,290.3	9.6	13.5	1.51	-68.4	-679.2	273.4	261.6	11.82	23.130		
3,500.0	3,465.6	3,473.5	3,385.7	9.9	14.0	1.49	-71.3	-706.9	285.1	272.9	12.17	23.422		
3,600.0	3,564.2	3,572.8	3,481.0	10.3	14.6	1.47	-74.2	-734.6	296.7	284.2	12.52	23.697		
3,700.0	3,662.8	3,672.1	3,576.4	10.6	15.1	1.45	-77.1	-762.3	308.4	295.5	12.87	23.957		
3,800.0	3,761.4	3,771.4	3,671.7	11.0	15.6	1.44	-79.9	-790.0	320.0	306.8	13.22	24.204		
3,900.0	3,860.0	3,870.8	3,767.0	11.3	16.2	1.42	-82.8	-817.7	331.6	318.1	13.57	24.438		
4,000.0	3,958.6	3,970.1	3,862.4	11.6	16.7	1.41	-85.7	-845.4	343.3	329.4	13.92	24.661		
4,100.0	4,057.2	4,069.4	3,957.7	12.0	17.2	1.40	-88.5	-873.1	354.9	340.7	14.27	24.872		
4,200.0	4,155.8	4,168.7	4,053.0	12.3	17.8	1.38	-91.4	-900.7	366.6	351.9	14.62	25.073		
4,300.0	4,254.4	4,268.0	4,148.4	12.7	18.3	1.37	-94.3	-928.4	378.2	363.2	14.97	25.265		
4,400.0	4,353.0	4,367.4	4,243.7	13.0	18.8	1.36	-97.2	-956.1	389.9	374.5	15.32	25.449		
4,500.0	4,451.6	4,466.7	4,339.1	13.3	19.4	1.35	-100.0	-983.8	401.5	385.8	15.67	25.624		
4,600.0	4,550.2	4,566.0	4,434.4	13.7	19.9	1.34	-102.9	-1,011.5	413.1	397.1	16.02	25.791		
4,700.0	4,648.8	4,665.3	4,529.7	14.0	20.4	1.34	-105.8	-1,039.2	424.8	408.4	16.37	25.951		
4,800.0	4,747.4	4,764.6	4,625.1	14.4	20.9	1.33	-108.7	-1,066.9	436.4	419.7	16.72	26.105		
4,900.0	4,846.0	4,864.0	4,720.4	14.7	21.5	1.32	-111.5	-1,094.6	448.1	431.0	17.07	26.252		
5,000.0	4,944.6	4,963.3	4,815.7	15.1	22.0	1.31	-114.4	-1,122.3	459.7	442.3	17.42	26.394		
5,100.0	5,043.2	5,062.6	4,911.1	15.4	22.5	1.31	-117.3	-1,150.0	471.4	453.6	17.77	26.529		

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 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,141.8	5,161.9	5,006.4	15.7	23.1	1.30	-120.2	-1,177.7	483.0	464.9	18.12	26.660	
5,300.0	5,240.4	5,261.2	5,101.8	16.1	23.6	1.29	-123.0	-1,205.4	494.6	476.2	18.47	26.786	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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: 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	-89.94	0.0	-8.4	8.4					
100.0	100.0	100.0	100.0	0.2	0.2	-89.94	0.0	-8.4	8.4	8.1	0.30	27.619		
200.0	200.0	200.0	200.0	0.3	0.3	-89.94	0.0	-8.4	8.4	7.7	0.65	12.849		
300.0	300.0	300.0	300.0	0.5	0.5	-89.94	0.0	-8.4	8.4	7.4	1.00	8.372 CC, ES		
400.0	400.0	399.8	399.8	0.7	0.7	-90.41	-0.1	-9.3	9.3	7.9	1.35	6.850		
500.0	500.0	499.7	499.6	0.9	0.9	5.35	-0.3	-11.9	11.0	9.3	1.70	6.470		
600.0	600.0	599.4	599.3	1.0	1.0	5.12	-0.7	-16.2	12.7	10.7	2.05	6.218		
700.0	699.9	699.2	698.9	1.2	1.2	5.12	-1.2	-22.2	14.5	12.1	2.40	6.040		
800.0	799.7	798.9	798.3	1.4	1.4	5.28	-1.8	-30.0	16.2	13.5	2.74	5.907		
900.0	899.4	898.6	897.5	1.6	1.7	5.55	-2.7	-39.5	17.9	14.9	3.09	5.804		
1,000.0	998.9	998.2	996.5	1.8	1.9	5.90	-3.6	-50.7	19.7	16.2	3.44	5.720		
1,100.0	1,098.3	1,097.9	1,095.3	2.1	2.2	6.31	-4.7	-63.7	21.4	17.6	3.79	5.652		
1,200.0	1,197.4	1,197.5	1,193.8	2.3	2.5	6.77	-6.0	-78.3	23.1	19.0	4.14	5.593		
1,300.0	1,296.3	1,297.0	1,292.0	2.6	2.8	7.27	-7.4	-94.6	24.9	20.4	4.49	5.541		
1,400.0	1,395.0	1,396.6	1,389.9	2.9	3.1	7.76	-8.9	-112.6	26.7	21.9	4.84	5.522		
1,500.0	1,493.6	1,496.0	1,487.4	3.3	3.5	7.88	-10.6	-132.3	30.0	24.8	5.20	5.776		
1,600.0	1,592.2	1,595.4	1,584.3	3.6	3.9	7.65	-12.4	-153.7	35.1	29.5	5.56	6.309		
1,700.0	1,690.8	1,695.1	1,681.5	3.9	4.3	7.33	-14.3	-176.1	41.1	35.2	5.91	6.956		
1,800.0	1,789.4	1,794.9	1,778.7	4.2	4.7	7.09	-16.3	-198.6	47.2	40.9	6.27	7.531		
1,900.0	1,888.0	1,894.7	1,876.0	4.6	5.2	6.90	-18.2	-221.1	53.3	46.6	6.62	8.045		
2,000.0	1,986.6	1,994.5	1,973.2	4.9	5.6	6.75	-20.1	-243.6	59.3	52.4	6.98	8.506		
2,100.0	2,085.2	2,094.4	2,070.4	5.2	6.0	6.63	-22.0	-266.0	65.4	58.1	7.33	8.923		
2,200.0	2,183.8	2,194.2	2,167.7	5.5	6.4	6.53	-24.0	-288.5	71.5	63.8	7.68	9.301		
2,300.0	2,282.4	2,294.0	2,264.9	5.9	6.9	6.45	-25.9	-311.0	77.5	69.5	8.04	9.646		
2,400.0	2,381.0	2,393.8	2,362.1	6.2	7.3	6.38	-27.8	-333.5	83.6	75.2	8.39	9.961		
2,500.0	2,479.6	2,493.6	2,459.4	6.6	7.7	6.31	-29.7	-356.0	89.7	80.9	8.75	10.252		
2,600.0	2,578.2	2,593.4	2,556.6	6.9	8.2	6.26	-31.6	-378.4	95.8	86.7	9.10	10.519		
2,700.0	2,676.8	2,693.3	2,653.8	7.2	8.6	6.21	-33.6	-400.9	101.8	92.4	9.46	10.767		
2,800.0	2,775.4	2,793.1	2,751.1	7.6	9.0	6.17	-35.5	-423.4	107.9	98.1	9.81	10.996		
2,900.0	2,874.0	2,892.9	2,848.3	7.9	9.5	6.13	-37.4	-445.9	114.0	103.8	10.17	11.210		
3,000.0	2,972.6	2,992.7	2,945.5	8.2	9.9	6.10	-39.3	-468.4	120.1	109.5	10.52	11.409		
3,100.0	3,071.2	3,092.5	3,042.8	8.6	10.3	6.07	-41.3	-490.9	126.1	115.3	10.88	11.595		
3,200.0	3,169.8	3,192.3	3,140.0	8.9	10.8	6.04	-43.2	-513.3	132.2	121.0	11.23	11.770		
3,300.0	3,268.4	3,292.1	3,237.2	9.3	11.2	6.01	-45.1	-535.8	138.3	126.7	11.59	11.933		
3,400.0	3,367.0	3,392.0	3,334.5	9.6	11.6	5.99	-47.0	-558.3	144.4	132.4	11.94	12.087		
3,500.0	3,465.6	3,491.8	3,431.7	9.9	12.1	5.97	-48.9	-580.8	150.4	138.1	12.30	12.233		
3,600.0	3,564.2	3,591.6	3,528.9	10.3	12.5	5.95	-50.9	-603.3	156.5	143.9	12.65	12.370		
3,700.0	3,662.8	3,691.4	3,626.1	10.6	13.0	5.93	-52.8	-625.7	162.6	149.6	13.01	12.499		
3,800.0	3,761.4	3,791.2	3,723.4	11.0	13.4	5.91	-54.7	-648.2	168.7	155.3	13.36	12.622		
3,900.0	3,860.0	3,891.0	3,820.6	11.3	13.8	5.90	-56.6	-670.7	174.7	161.0	13.72	12.738		
4,000.0	3,958.6	3,990.9	3,917.8	11.6	14.3	5.88	-58.6	-693.2	180.8	166.7	14.07	12.849		
4,100.0	4,057.2	4,090.7	4,015.1	12.0	14.7	5.87	-60.5	-715.7	186.9	172.4	14.43	12.954		
4,200.0	4,155.8	4,190.5	4,112.3	12.3	15.1	5.85	-62.4	-738.1	192.9	178.2	14.78	13.054		
4,300.0	4,254.4	4,290.3	4,209.5	12.7	15.6	5.84	-64.3	-760.6	199.0	183.9	15.14	13.149		
4,400.0	4,353.0	4,390.1	4,306.8	13.0	16.0	5.83	-66.3	-783.1	205.1	189.6	15.49	13.240		
4,500.0	4,451.6	4,489.9	4,404.0	13.3	16.5	5.82	-68.2	-805.6	211.2	195.3	15.85	13.327		
4,600.0	4,550.2	4,589.7	4,501.2	13.7	16.9	5.81	-70.1	-828.1	217.2	201.0	16.20	13.410		
4,700.0	4,648.8	4,689.6	4,598.5	14.0	17.3	5.80	-72.0	-850.6	223.3	206.8	16.55	13.490		
4,800.0	4,747.4	4,789.4	4,695.7	14.4	17.8	5.79	-73.9	-873.0	229.4	212.5	16.91	13.566		
4,900.0	4,846.0	4,889.2	4,792.9	14.7	18.2	5.78	-75.9	-895.5	235.5	218.2	17.26	13.639		
5,000.0	4,944.6	4,989.0	4,890.2	15.1	18.6	5.77	-77.8	-918.0	241.5	223.9	17.62	13.709		
5,100.0	5,043.2	5,088.8	4,987.4	15.4	19.1	5.77	-79.7	-940.5	247.6	229.6	17.97	13.776		

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 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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: 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)	
5,200.0	5,141.8	5,188.6	5,084.6	15.7	19.5	5.76	-81.6	-963.0	253.7	235.4	18.33	13.841		
5,300.0	5,240.4	5,288.5	5,181.9	16.1	20.0	5.75	-83.6	-985.4	259.8	241.1	18.68	13.903		
5,400.0	5,339.0	5,388.3	5,279.1	16.4	20.4	5.74	-85.5	-1,007.9	265.8	246.8	19.04	13.963		
5,500.0	5,437.6	5,488.1	5,376.3	16.8	20.8	5.74	-87.4	-1,030.4	271.9	252.5	19.39	14.021		
5,600.0	5,536.2	5,587.9	5,473.6	17.1	21.3	5.73	-89.3	-1,052.9	278.0	258.2	19.75	14.077		
5,700.0	5,634.8	5,687.7	5,570.8	17.4	21.7	5.73	-91.2	-1,075.4	284.1	263.9	20.10	14.130		
5,800.0	5,733.4	5,787.5	5,668.0	17.8	22.1	5.72	-93.2	-1,097.8	290.1	269.7	20.46	14.182		
5,900.0	5,832.0	5,887.3	5,765.2	18.1	22.6	5.71	-95.1	-1,120.3	296.2	275.4	20.81	14.232		
6,000.0	5,930.6	5,987.2	5,862.5	18.5	23.0	5.71	-97.0	-1,142.8	302.3	281.1	21.17	14.281		
6,100.0	6,029.2	6,087.0	5,959.7	18.8	23.5	5.70	-98.9	-1,165.3	308.3	286.8	21.52	14.328		
6,200.0	6,127.8	6,186.8	6,056.9	19.2	23.9	5.70	-100.9	-1,187.8	314.4	292.5	21.88	14.373		
6,300.0	6,226.4	6,286.6	6,154.2	19.5	24.3	5.70	-102.8	-1,210.2	320.5	298.3	22.23	14.417		
6,400.0	6,325.0	6,386.4	6,251.4	19.8	24.8	5.69	-104.7	-1,232.7	326.6	304.0	22.59	14.459		
6,500.0	6,423.6	6,486.2	6,348.6	20.2	25.2	5.69	-106.6	-1,255.2	332.6	309.7	22.94	14.500		
6,600.0	6,522.2	6,586.1	6,445.9	20.5	25.7	5.68	-108.6	-1,277.7	338.7	315.4	23.29	14.540		
6,700.0	6,620.8	6,685.9	6,543.1	20.9	26.1	5.68	-110.5	-1,300.2	344.8	321.1	23.65	14.579		
6,800.0	6,719.4	6,785.7	6,640.3	21.2	26.5	5.67	-112.4	-1,322.7	350.9	326.9	24.00	14.617		
6,900.0	6,818.0	6,885.5	6,737.4	21.5	27.0	6.54	-108.9	-1,345.1	356.9	332.5	24.43	14.609		
7,000.0	6,916.6	6,980.8	6,828.3	21.9	27.3	6.20	-89.9	-1,366.1	363.8	338.6	25.19	14.441		
7,100.0	7,014.8	7,070.7	6,910.1	22.2	27.7	-36.37	-58.1	-1,385.0	372.7	346.4	26.25	14.194		
7,200.0	7,110.1	7,157.3	6,983.4	22.5	28.0	-50.78	-15.3	-1,402.0	382.9	355.8	27.06	14.149		
7,300.0	7,199.7	7,241.3	7,047.7	22.8	28.3	-54.88	36.5	-1,416.8	393.6	366.3	27.33	14.403		
7,400.0	7,280.8	7,323.1	7,102.6	23.1	28.6	-55.73	95.7	-1,429.5	404.1	377.2	26.99	14.972		
7,500.0	7,351.0	7,400.0	7,146.2	23.4	28.9	-55.53	158.2	-1,439.6	413.7	387.5	26.24	15.765		
7,600.0	7,408.1	7,482.1	7,183.4	23.8	29.3	-54.88	230.8	-1,448.2	421.8	396.3	25.53	16.520		
7,700.0	7,450.4	7,560.1	7,209.0	24.3	29.6	-54.31	304.2	-1,454.1	427.9	402.5	25.43	16.826		
7,800.0	7,476.6	7,637.5	7,224.5	24.8	30.0	-53.92	379.9	-1,457.7	431.7	405.3	26.49	16.298		
7,900.0	7,486.0	7,714.6	7,230.0	25.4	30.4	-53.77	456.7	-1,459.0	433.1	404.2	28.91	14.982		
8,000.0	7,486.0	7,813.6	7,230.0	26.1	31.0	-53.77	555.7	-1,459.0	433.1	402.4	30.71	14.103		
8,100.0	7,486.0	7,913.6	7,230.0	26.9	31.7	-53.77	655.7	-1,459.0	433.1	400.5	32.60	13.285		
8,200.0	7,486.0	8,013.6	7,230.0	27.8	32.4	-53.77	755.7	-1,459.0	433.1	398.5	34.62	12.510		
8,300.0	7,486.0	8,113.6	7,230.0	28.8	33.3	-53.77	855.7	-1,459.0	433.1	396.4	36.75	11.785		
8,400.0	7,486.0	8,213.6	7,230.0	29.9	34.2	-53.77	955.7	-1,459.0	433.1	394.2	38.97	11.114		
8,500.0	7,486.0	8,313.6	7,230.0	31.0	35.1	-53.77	1,055.7	-1,459.0	433.1	391.9	41.27	10.496		
8,600.0	7,486.0	8,413.6	7,230.0	32.1	36.2	-53.77	1,155.7	-1,459.0	433.1	389.5	43.63	9.928		
8,700.0	7,486.0	8,513.6	7,230.0	33.4	37.2	-53.77	1,255.7	-1,459.0	433.1	387.1	46.04	9.407		
8,800.0	7,486.0	8,613.6	7,230.0	34.6	38.4	-53.77	1,355.7	-1,459.0	433.1	384.6	48.50	8.930		
8,900.0	7,486.0	8,713.6	7,230.0	35.9	39.5	-53.77	1,455.7	-1,459.0	433.1	382.1	51.00	8.493		
9,000.0	7,486.0	8,813.6	7,230.0	37.3	40.7	-53.77	1,555.7	-1,459.0	433.1	379.6	53.53	8.091		
9,100.0	7,486.0	8,913.6	7,230.0	38.6	42.0	-53.77	1,655.7	-1,459.0	433.1	377.0	56.10	7.721		
9,200.0	7,486.0	9,013.6	7,230.0	40.1	43.3	-53.77	1,755.7	-1,459.0	433.1	374.4	58.68	7.381		
9,300.0	7,486.0	9,113.6	7,230.0	41.5	44.6	-53.77	1,855.7	-1,459.0	433.1	371.8	61.29	7.066		
9,400.0	7,486.0	9,213.6	7,230.0	42.9	46.0	-53.77	1,955.7	-1,459.0	433.1	369.2	63.92	6.776		
9,500.0	7,486.0	9,313.6	7,230.0	44.4	47.3	-53.77	2,055.7	-1,459.0	433.1	366.6	66.57	6.506		
9,600.0	7,486.0	9,413.6	7,230.0	45.9	48.7	-53.77	2,155.7	-1,459.0	433.1	363.9	69.23	6.256		
9,700.0	7,486.0	9,513.6	7,230.0	47.4	50.2	-53.77	2,255.7	-1,459.0	433.1	361.2	71.91	6.023		
9,800.0	7,486.0	9,613.6	7,230.0	49.0	51.6	-53.77	2,355.7	-1,459.0	433.1	358.5	74.60	5.806		
9,900.0	7,486.0	9,713.6	7,230.0	50.5	53.1	-53.77	2,455.7	-1,459.0	433.1	355.8	77.30	5.603		
10,000.0	7,486.0	9,813.6	7,230.0	52.1	54.6	-53.77	2,555.7	-1,459.0	433.1	353.1	80.00	5.414		
10,100.0	7,486.0	9,913.6	7,230.0	53.7	56.1	-53.77	2,655.7	-1,459.0	433.1	350.4	82.72	5.236		
10,200.0	7,486.0	10,013.6	7,230.0	55.2	57.6	-53.77	2,755.7	-1,459.0	433.1	347.7	85.45	5.069		
10,300.0	7,486.0	10,113.6	7,230.0	56.8	59.1	-53.77	2,855.7	-1,459.0	433.1	344.9	88.18	4.912		

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 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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: 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	7,486.0	10,213.6	7,230.0	58.4	60.6	-53.77	2,955.7	-1,459.0	433.1	342.2	90.92	4.764		
10,500.0	7,486.0	10,313.6	7,230.0	60.0	62.2	-53.77	3,055.7	-1,459.0	433.1	339.5	93.66	4.624		
10,600.0	7,486.0	10,413.6	7,230.0	61.7	63.8	-53.77	3,155.7	-1,459.0	433.1	336.7	96.41	4.492		
10,700.0	7,486.0	10,513.6	7,230.0	63.3	65.3	-53.77	3,255.7	-1,459.0	433.1	334.0	99.17	4.368		
10,800.0	7,486.0	10,613.6	7,230.0	64.9	66.9	-53.77	3,355.7	-1,459.0	433.1	331.2	101.93	4.249		
10,900.0	7,486.0	10,713.6	7,230.0	66.6	68.5	-53.77	3,455.7	-1,459.0	433.1	328.4	104.69	4.137		
11,000.0	7,486.0	10,813.6	7,230.0	68.2	70.1	-53.77	3,555.7	-1,459.0	433.1	325.7	107.46	4.031		
11,100.0	7,486.0	10,913.6	7,230.0	69.9	71.7	-53.77	3,655.7	-1,459.0	433.1	322.9	110.23	3.929		
11,200.0	7,486.0	11,013.6	7,230.0	71.5	73.3	-53.77	3,755.7	-1,459.0	433.1	320.1	113.01	3.833		
11,300.0	7,486.0	11,113.6	7,230.0	73.2	74.9	-53.77	3,855.7	-1,459.0	433.1	317.3	115.79	3.741		
11,400.0	7,486.0	11,213.6	7,230.0	74.8	76.6	-53.77	3,955.7	-1,459.0	433.1	314.6	118.57	3.653		
11,500.0	7,486.0	11,313.6	7,230.0	76.5	78.2	-53.77	4,055.7	-1,459.0	433.1	311.8	121.35	3.569		
11,600.0	7,486.0	11,413.6	7,230.0	78.2	79.8	-53.77	4,155.7	-1,459.0	433.1	309.0	124.14	3.489		
11,700.0	7,486.0	11,513.6	7,230.0	79.8	81.5	-53.77	4,255.7	-1,459.0	433.1	306.2	126.93	3.412		
11,800.0	7,486.0	11,613.6	7,230.0	81.5	83.1	-53.77	4,355.7	-1,459.0	433.1	303.4	129.72	3.339		
11,900.0	7,486.0	11,713.6	7,230.0	83.2	84.7	-53.77	4,455.7	-1,459.0	433.1	300.6	132.51	3.269		
12,000.0	7,486.0	11,813.6	7,230.0	84.9	86.4	-53.77	4,555.7	-1,459.0	433.1	297.8	135.30	3.201		
12,100.0	7,486.0	11,913.6	7,230.0	86.6	88.1	-53.77	4,655.7	-1,459.0	433.1	295.0	138.10	3.136		
12,200.0	7,486.0	12,013.6	7,230.0	88.3	89.7	-53.77	4,755.7	-1,459.0	433.1	292.2	140.90	3.074		
12,300.0	7,486.0	12,113.6	7,230.0	90.0	91.4	-53.77	4,855.7	-1,459.0	433.1	289.4	143.70	3.014		
12,400.0	7,486.0	12,213.6	7,230.0	91.7	93.1	-53.77	4,955.7	-1,459.0	433.1	286.6	146.50	2.957		
12,500.0	7,486.0	12,313.6	7,230.0	93.4	94.7	-53.77	5,055.7	-1,459.0	433.1	283.8	149.30	2.901		
12,600.0	7,486.0	12,413.6	7,230.0	95.1	96.4	-53.77	5,155.7	-1,459.0	433.1	281.0	152.11	2.848		
12,700.0	7,486.0	12,513.6	7,230.0	96.8	98.1	-53.77	5,255.7	-1,459.0	433.1	278.2	154.91	2.796		
12,800.0	7,486.0	12,613.6	7,230.0	98.5	99.8	-53.77	5,355.7	-1,459.0	433.1	275.4	157.72	2.746		
12,900.0	7,486.0	12,713.6	7,230.0	100.2	101.4	-53.77	5,455.7	-1,459.0	433.1	272.6	160.53	2.698		
13,000.0	7,486.0	12,813.6	7,230.0	101.9	103.1	-53.77	5,555.7	-1,459.0	433.1	269.8	163.33	2.652		
13,100.0	7,486.0	12,913.6	7,230.0	103.6	104.8	-53.77	5,655.7	-1,459.0	433.1	267.0	166.14	2.607		
13,200.0	7,486.0	13,013.6	7,230.0	105.3	106.5	-53.77	5,755.7	-1,459.0	433.1	264.2	168.96	2.564		
13,300.0	7,486.0	13,113.6	7,230.0	107.0	108.2	-53.77	5,855.7	-1,459.0	433.1	261.4	171.77	2.522		
13,400.0	7,486.0	13,213.6	7,230.0	108.7	109.9	-53.77	5,955.7	-1,459.0	433.1	258.5	174.58	2.481		
13,500.0	7,486.0	13,313.6	7,230.0	110.4	111.6	-53.77	6,055.7	-1,459.0	433.1	255.7	177.39	2.442		
13,600.0	7,486.0	13,413.6	7,230.0	112.1	113.3	-53.77	6,155.7	-1,459.0	433.1	252.9	180.21	2.403		
13,700.0	7,486.0	13,513.6	7,230.0	113.9	115.0	-53.77	6,255.7	-1,459.0	433.1	250.1	183.02	2.367		
13,800.0	7,486.0	13,613.6	7,230.0	115.6	116.7	-53.77	6,355.7	-1,459.0	433.1	247.3	185.84	2.331		
13,900.0	7,486.0	13,713.6	7,230.0	117.3	118.4	-53.77	6,455.7	-1,459.0	433.1	244.5	188.66	2.296		
14,000.0	7,486.0	13,813.6	7,230.0	119.0	120.1	-53.77	6,555.7	-1,459.0	433.1	241.7	191.47	2.262		
14,100.0	7,486.0	13,913.6	7,230.0	120.7	121.8	-53.77	6,655.7	-1,459.0	433.1	238.8	194.29	2.229		
14,200.0	7,486.0	14,013.6	7,230.0	122.5	123.5	-53.77	6,755.7	-1,459.0	433.1	236.0	197.11	2.197		
14,300.0	7,486.0	14,113.6	7,230.0	124.2	125.2	-53.77	6,855.7	-1,459.0	433.1	233.2	199.93	2.166		
14,400.0	7,486.0	14,213.6	7,230.0	125.9	126.9	-53.77	6,955.7	-1,459.0	433.1	230.4	202.75	2.136		
14,500.0	7,486.0	14,313.6	7,230.0	127.6	128.6	-53.77	7,055.7	-1,459.0	433.1	227.6	205.57	2.107		
14,562.4	7,486.0	14,376.0	7,230.0	128.7	129.7	-53.77	7,118.1	-1,459.0	433.1	225.8	207.33	2.089 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 1D-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	90.04	0.0	11.2	11.2					
100.0	100.0	99.0	99.0	0.2	0.2	90.04	0.0	11.2	11.2	10.9	0.30	37.010		
200.0	200.0	199.0	199.0	0.3	0.3	90.04	0.0	11.2	11.2	10.5	0.65	17.178		
300.0	300.0	299.0	299.0	0.5	0.5	90.04	0.0	11.2	11.2	10.2	1.00	11.182		
400.0	400.0	399.0	399.0	0.7	0.7	90.04	0.0	11.2	11.2	9.8	1.35	8.289 CC, ES		
500.0	500.0	499.0	499.0	0.9	0.8	-174.07	0.0	11.2	12.1	10.4	1.70	7.097		
600.0	600.0	599.2	599.2	1.0	1.0	-174.65	-0.1	10.3	13.8	11.8	2.05	6.746		
700.0	699.9	699.4	699.4	1.2	1.2	-174.80	-0.6	7.8	15.6	13.2	2.40	6.500		
800.0	799.7	799.7	799.6	1.4	1.4	-174.63	-1.2	3.4	17.3	14.6	2.74	6.319		
900.0	899.4	900.0	899.7	1.6	1.6	-174.25	-2.2	-2.6	19.1	16.0	3.09	6.181		
1,000.0	998.9	1,000.3	999.7	1.8	1.8	-173.70	-3.5	-10.4	20.9	17.5	3.44	6.072		
1,100.0	1,098.3	1,100.7	1,099.6	2.1	2.0	-173.02	-5.0	-19.9	22.7	18.9	3.79	5.983		
1,200.0	1,197.4	1,201.0	1,199.3	2.3	2.2	-172.25	-6.8	-31.1	24.5	20.4	4.14	5.911		
1,300.0	1,296.3	1,301.0	1,298.5	2.6	2.5	-171.84	-8.7	-43.0	27.3	22.8	4.50	6.081		
1,400.0	1,395.0	1,400.9	1,397.7	2.9	2.7	-171.93	-10.6	-54.8	31.8	26.9	4.85	6.553		
1,500.0	1,493.6	1,500.8	1,496.9	3.3	3.0	-172.07	-12.5	-66.7	36.5	31.3	5.20	7.014		
1,600.0	1,592.2	1,600.7	1,596.0	3.6	3.3	-172.17	-14.4	-78.6	41.2	35.7	5.56	7.416		
1,700.0	1,690.8	1,700.6	1,695.2	3.9	3.5	-172.26	-16.3	-90.4	46.0	40.0	5.92	7.770		
1,800.0	1,789.4	1,800.5	1,794.4	4.2	3.8	-172.33	-18.2	-102.3	50.7	44.4	6.27	8.084		
1,900.0	1,888.0	1,900.3	1,893.5	4.6	4.0	-172.38	-20.1	-114.2	55.4	48.8	6.63	8.363		
2,000.0	1,986.6	2,000.2	1,992.7	4.9	4.3	-172.43	-22.0	-126.0	60.2	53.2	6.98	8.614		
2,100.0	2,085.2	2,100.1	2,091.8	5.2	4.6	-172.47	-23.9	-137.9	64.9	57.6	7.34	8.841		
2,200.0	2,183.8	2,200.0	2,191.0	5.5	4.8	-172.51	-25.8	-149.8	69.6	61.9	7.70	9.046		
2,300.0	2,282.4	2,299.9	2,290.2	5.9	5.1	-172.54	-27.7	-161.6	74.4	66.3	8.05	9.234		
2,400.0	2,381.0	2,399.8	2,389.3	6.2	5.4	-172.57	-29.6	-173.5	79.1	70.7	8.41	9.405		
2,500.0	2,479.6	2,499.7	2,488.5	6.6	5.6	-172.59	-31.5	-185.4	83.8	75.1	8.77	9.563		
2,600.0	2,578.2	2,599.6	2,587.7	6.9	5.9	-172.61	-33.4	-197.2	88.6	79.4	9.12	9.708		
2,700.0	2,676.8	2,699.4	2,686.8	7.2	6.2	-172.63	-35.3	-209.1	93.3	83.8	9.48	9.842		
2,800.0	2,775.4	2,799.3	2,786.0	7.6	6.4	-172.65	-37.2	-220.9	98.0	88.2	9.84	9.966		
2,900.0	2,874.0	2,899.2	2,885.1	7.9	6.7	-172.66	-39.1	-232.8	102.8	92.6	10.19	10.082		
3,000.0	2,972.6	2,999.1	2,984.3	8.2	7.0	-172.68	-41.0	-244.7	107.5	96.9	10.55	10.190		
3,100.0	3,071.2	3,099.0	3,083.5	8.6	7.3	-172.69	-42.9	-256.5	112.2	101.3	10.91	10.291		
3,200.0	3,169.8	3,198.9	3,182.6	8.9	7.5	-172.70	-44.8	-268.4	117.0	105.7	11.26	10.385		
3,300.0	3,268.4	3,298.8	3,281.8	9.3	7.8	-172.72	-46.7	-280.3	121.7	110.1	11.62	10.473		
3,400.0	3,367.0	3,398.7	3,381.0	9.6	8.1	-172.73	-48.6	-292.1	126.4	114.5	11.98	10.557		
3,500.0	3,465.6	3,498.6	3,480.1	9.9	8.3	-172.74	-50.5	-304.0	131.2	118.8	12.33	10.635		
3,600.0	3,564.2	3,598.4	3,579.3	10.3	8.6	-172.74	-52.4	-315.9	135.9	123.2	12.69	10.709		
3,700.0	3,662.8	3,698.3	3,678.4	10.6	8.9	-172.75	-54.3	-327.7	140.6	127.6	13.05	10.779		
3,800.0	3,761.4	3,798.2	3,777.6	11.0	9.2	-172.76	-56.2	-339.6	145.4	132.0	13.40	10.846		
3,900.0	3,860.0	3,898.1	3,876.8	11.3	9.4	-172.77	-58.1	-351.5	150.1	136.3	13.76	10.908		
4,000.0	3,958.6	3,998.0	3,975.9	11.6	9.7	-172.77	-60.0	-363.3	154.8	140.7	14.12	10.968		
4,100.0	4,057.2	4,097.9	4,075.1	12.0	10.0	-172.78	-61.9	-375.2	159.6	145.1	14.47	11.025		
4,200.0	4,155.8	4,197.8	4,174.3	12.3	10.2	-172.79	-63.8	-387.0	164.3	149.5	14.83	11.079		
4,300.0	4,254.4	4,297.7	4,273.4	12.7	10.5	-172.79	-65.7	-398.9	169.0	153.8	15.19	11.130		
4,400.0	4,353.0	4,397.5	4,372.6	13.0	10.8	-172.80	-67.6	-410.8	173.8	158.2	15.54	11.179		
4,500.0	4,451.6	4,497.4	4,471.7	13.3	11.1	-172.80	-69.5	-422.6	178.5	162.6	15.90	11.226		
4,600.0	4,550.2	4,597.3	4,570.9	13.7	11.3	-172.81	-71.4	-434.5	183.2	167.0	16.26	11.271		
4,700.0	4,648.8	4,697.2	4,670.1	14.0	11.6	-172.81	-73.3	-446.4	188.0	171.4	16.61	11.314		
4,800.0	4,747.4	4,797.1	4,769.2	14.4	11.9	-172.82	-75.2	-458.2	192.7	175.7	16.97	11.355		
4,900.0	4,846.0	4,897.0	4,868.4	14.7	12.2	-172.82	-77.1	-470.1	197.4	180.1	17.33	11.394		
5,000.0	4,944.6	4,996.9	4,967.6	15.1	12.4	-172.83	-79.0	-482.0	202.2	184.5	17.68	11.432		
5,100.0	5,043.2	5,096.8	5,066.7	15.4	12.7	-172.83	-80.9	-493.8	206.9	188.9	18.04	11.468		

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 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 1D-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)	
5,200.0	5,141.8	5,196.6	5,165.9	15.7	13.0	-172.83	-82.8	-505.7	211.6	193.2	18.40	11.503		
5,300.0	5,240.4	5,296.5	5,265.0	16.1	13.2	-172.84	-84.7	-517.6	216.4	197.6	18.76	11.536		
5,400.0	5,339.0	5,396.4	5,364.2	16.4	13.5	-172.84	-86.6	-529.4	221.1	202.0	19.11	11.569		
5,500.0	5,437.6	5,496.3	5,463.4	16.8	13.8	-172.84	-88.5	-541.3	225.8	206.4	19.47	11.600		
5,600.0	5,536.2	5,596.2	5,562.5	17.1	14.1	-172.85	-90.4	-553.2	230.6	210.7	19.83	11.630		
5,700.0	5,634.8	5,696.1	5,661.7	17.4	14.3	-172.85	-92.3	-565.0	235.3	215.1	20.18	11.659		
5,800.0	5,733.4	5,796.0	5,760.9	17.8	14.6	-172.85	-94.2	-576.9	240.0	219.5	20.54	11.687		
5,900.0	5,832.0	5,895.9	5,860.0	18.1	14.9	-172.86	-96.1	-588.7	244.8	223.9	20.90	11.714		
6,000.0	5,930.6	5,995.8	5,959.2	18.5	15.2	-172.86	-98.0	-600.6	249.5	228.2	21.25	11.740		
6,100.0	6,029.2	6,095.6	6,058.3	18.8	15.4	-172.86	-99.9	-612.5	254.2	232.6	21.61	11.765		
6,200.0	6,127.8	6,195.5	6,157.5	19.2	15.7	-172.86	-101.8	-624.3	259.0	237.0	21.97	11.789		
6,300.0	6,226.4	6,295.4	6,256.7	19.5	16.0	-172.87	-103.7	-636.2	263.7	241.4	22.32	11.813		
6,400.0	6,325.0	6,395.3	6,355.8	19.8	16.3	-172.87	-105.6	-648.1	268.4	245.8	22.68	11.836		
6,500.0	6,423.6	6,495.2	6,455.0	20.2	16.5	-172.87	-107.5	-659.9	273.2	250.1	23.04	11.858		
6,600.0	6,522.2	6,595.1	6,554.2	20.5	16.8	-172.87	-109.4	-671.8	277.9	254.5	23.39	11.879		
6,700.0	6,620.8	6,695.0	6,653.3	20.9	17.1	-172.87	-111.3	-683.7	282.6	258.9	23.75	11.900		
6,800.0	6,719.4	6,795.0	6,752.6	21.2	17.3	-173.56	-109.8	-695.5	287.3	263.3	24.03	11.958		
6,900.0	6,818.0	6,891.7	6,847.0	21.5	17.6	-177.21	-93.0	-706.8	292.7	268.6	24.11	12.138		
7,000.0	6,916.6	6,979.9	6,929.6	21.9	17.7	173.26	-63.9	-716.7	301.6	277.1	24.48	12.317		
7,100.0	7,014.8	7,061.3	7,001.1	22.2	17.9	118.87	-26.0	-725.3	315.5	289.8	25.67	12.290		
7,200.0	7,110.1	7,139.3	7,063.9	22.5	18.1	94.01	19.5	-732.8	332.1	304.9	27.22	12.200		
7,300.0	7,199.7	7,214.7	7,118.3	22.8	18.3	80.97	71.3	-739.3	349.7	321.0	28.68	12.193		
7,400.0	7,280.8	7,288.2	7,164.3	23.1	18.6	72.72	128.2	-744.8	366.8	337.2	29.62	12.382		
7,500.0	7,351.0	7,360.1	7,202.0	23.4	18.9	67.07	189.2	-749.3	382.2	352.2	29.93	12.768		
7,600.0	7,408.1	7,430.9	7,231.4	23.8	19.3	63.17	253.4	-752.8	395.0	365.3	29.68	13.308		
7,700.0	7,450.4	7,500.0	7,252.4	24.3	19.7	60.60	319.2	-755.3	404.5	375.5	29.04	13.929		
7,800.0	7,476.6	7,570.3	7,265.4	24.8	20.2	59.10	388.3	-756.9	410.5	382.2	28.31	14.500		
7,900.0	7,486.0	7,643.1	7,270.0	25.4	20.8	58.59	460.8	-757.4	412.6	384.9	27.74	14.877		
7,935.3	7,486.2	7,673.3	7,270.0	25.7	21.0	58.58	491.0	-757.4	412.7	384.4	28.35	14.561		
8,000.0	7,486.0	7,738.0	7,270.0	26.1	21.6	58.60	555.7	-757.4	412.6	383.0	29.58	13.948		
8,100.0	7,486.0	7,838.0	7,270.0	26.9	22.6	58.60	655.7	-757.4	412.6	380.9	31.72	13.009		
8,200.0	7,486.0	7,938.0	7,270.0	27.8	23.7	58.60	755.7	-757.4	412.6	378.6	33.98	12.142		
8,300.0	7,486.0	8,038.0	7,270.0	28.8	24.8	58.60	855.7	-757.4	412.6	376.3	36.35	11.350		
8,400.0	7,486.0	8,138.0	7,270.0	29.9	26.0	58.60	955.7	-757.4	412.6	373.8	38.81	10.630		
8,500.0	7,486.0	8,238.0	7,270.0	31.0	27.3	58.60	1,055.7	-757.4	412.6	371.3	41.35	9.980		
8,600.0	7,486.0	8,338.0	7,270.0	32.1	28.6	58.60	1,155.7	-757.4	412.6	368.7	43.94	9.391		
8,700.0	7,486.0	8,438.0	7,270.0	33.4	30.0	58.60	1,255.7	-757.4	412.6	366.0	46.58	8.859		
8,800.0	7,486.0	8,538.0	7,270.0	34.6	31.4	58.60	1,355.7	-757.4	412.6	363.4	49.26	8.377		
8,900.0	7,486.0	8,638.0	7,270.0	35.9	32.8	58.60	1,455.7	-757.4	412.6	360.6	51.97	7.939		
9,000.0	7,486.0	8,738.0	7,270.0	37.3	34.3	58.60	1,555.7	-757.4	412.6	357.9	54.72	7.540		
9,100.0	7,486.0	8,838.0	7,270.0	38.6	35.8	58.60	1,655.7	-757.4	412.6	355.1	57.49	7.177		
9,200.0	7,486.0	8,938.0	7,270.0	40.1	37.3	58.60	1,755.7	-757.4	412.6	352.3	60.29	6.844		
9,300.0	7,486.0	9,038.0	7,270.0	41.5	38.8	58.60	1,855.7	-757.4	412.6	349.5	63.10	6.539		
9,400.0	7,486.0	9,138.0	7,270.0	42.9	40.4	58.60	1,955.7	-757.4	412.6	346.7	65.93	6.259		
9,500.0	7,486.0	9,238.0	7,270.0	44.4	41.9	58.60	2,055.7	-757.4	412.6	343.8	68.77	6.000		
9,600.0	7,486.0	9,338.0	7,270.0	45.9	43.5	58.60	2,155.7	-757.4	412.6	341.0	71.63	5.760		
9,700.0	7,486.0	9,438.0	7,270.0	47.4	45.1	58.60	2,255.7	-757.4	412.6	338.1	74.50	5.539		
9,800.0	7,486.0	9,538.0	7,270.0	49.0	46.7	58.60	2,355.7	-757.4	412.6	335.2	77.38	5.333		
9,900.0	7,486.0	9,638.0	7,270.0	50.5	48.3	58.60	2,455.7	-757.4	412.6	332.4	80.26	5.141		
10,000.0	7,486.0	9,738.0	7,270.0	52.1	50.0	58.60	2,555.7	-757.4	412.6	329.5	83.16	4.962		
10,100.0	7,486.0	9,838.0	7,270.0	53.7	51.6	58.60	2,655.7	-757.4	412.6	326.6	86.06	4.794		
10,200.0	7,486.0	9,938.0	7,270.0	55.2	53.2	58.60	2,755.7	-757.4	412.6	323.6	88.97	4.638		

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 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 1D-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	7,486.0	10,038.0	7,270.0	56.8	54.9	58.60	2,855.7	-757.4	412.6	320.7	91.88	4.491		
10,400.0	7,486.0	10,138.0	7,270.0	58.4	56.6	58.60	2,955.7	-757.4	412.6	317.8	94.80	4.352		
10,500.0	7,486.0	10,238.0	7,270.0	60.0	58.2	58.60	3,055.7	-757.4	412.6	314.9	97.73	4.222		
10,600.0	7,486.0	10,338.0	7,270.0	61.7	59.9	58.60	3,155.7	-757.4	412.6	312.0	100.66	4.099		
10,700.0	7,486.0	10,438.0	7,270.0	63.3	61.6	58.60	3,255.7	-757.4	412.6	309.0	103.59	3.983		
10,800.0	7,486.0	10,538.0	7,270.0	64.9	63.2	58.60	3,355.7	-757.4	412.6	306.1	106.53	3.873		
10,900.0	7,486.0	10,638.0	7,270.0	66.6	64.9	58.60	3,455.7	-757.4	412.6	303.1	109.47	3.769		
11,000.0	7,486.0	10,738.0	7,270.0	68.2	66.6	58.60	3,555.7	-757.4	412.6	300.2	112.42	3.670		
11,100.0	7,486.0	10,838.0	7,270.0	69.9	68.3	58.60	3,655.7	-757.4	412.6	297.3	115.36	3.577		
11,200.0	7,486.0	10,938.0	7,270.0	71.5	70.0	58.60	3,755.7	-757.4	412.6	294.3	118.31	3.487		
11,300.0	7,486.0	11,038.0	7,270.0	73.2	71.7	58.60	3,855.7	-757.4	412.6	291.3	121.27	3.403		
11,400.0	7,486.0	11,138.0	7,270.0	74.8	73.4	58.60	3,955.7	-757.4	412.6	288.4	124.22	3.322		
11,500.0	7,486.0	11,238.0	7,270.0	76.5	75.1	58.60	4,055.7	-757.4	412.6	285.4	127.18	3.244		
11,600.0	7,486.0	11,338.0	7,270.0	78.2	76.8	58.60	4,155.7	-757.4	412.6	282.5	130.14	3.171		
11,700.0	7,486.0	11,438.0	7,270.0	79.8	78.5	58.60	4,255.7	-757.4	412.6	279.5	133.10	3.100		
11,800.0	7,486.0	11,538.0	7,270.0	81.5	80.2	58.60	4,355.7	-757.4	412.6	276.6	136.06	3.033		
11,900.0	7,486.0	11,638.0	7,270.0	83.2	81.9	58.60	4,455.7	-757.4	412.6	273.6	139.02	2.968		
12,000.0	7,486.0	11,738.0	7,270.0	84.9	83.6	58.60	4,555.7	-757.4	412.6	270.6	141.99	2.906		
12,100.0	7,486.0	11,838.0	7,270.0	86.6	85.3	58.60	4,655.7	-757.4	412.6	267.7	144.96	2.846		
12,200.0	7,486.0	11,938.0	7,270.0	88.3	87.0	58.60	4,755.7	-757.4	412.6	264.7	147.92	2.789		
12,300.0	7,486.0	12,038.0	7,270.0	90.0	88.7	58.60	4,855.7	-757.4	412.6	261.7	150.89	2.734		
12,400.0	7,486.0	12,138.0	7,270.0	91.7	90.5	58.60	4,955.7	-757.4	412.6	258.7	153.87	2.682		
12,500.0	7,486.0	12,238.0	7,270.0	93.4	92.2	58.60	5,055.7	-757.4	412.6	255.8	156.84	2.631		
12,600.0	7,486.0	12,338.0	7,270.0	95.1	93.9	58.60	5,155.7	-757.4	412.6	252.8	159.81	2.582		
12,700.0	7,486.0	12,438.0	7,270.0	96.8	95.6	58.60	5,255.7	-757.4	412.6	249.8	162.79	2.535		
12,800.0	7,486.0	12,538.0	7,270.0	98.5	97.3	58.60	5,355.7	-757.4	412.6	246.9	165.76	2.489		
12,900.0	7,486.0	12,638.0	7,270.0	100.2	99.1	58.60	5,455.7	-757.4	412.6	243.9	168.74	2.445		
13,000.0	7,486.0	12,738.0	7,270.0	101.9	100.8	58.60	5,555.7	-757.4	412.6	240.9	171.71	2.403		
13,100.0	7,486.0	12,838.0	7,270.0	103.6	102.5	58.60	5,655.7	-757.4	412.6	237.9	174.69	2.362		
13,200.0	7,486.0	12,938.0	7,270.0	105.3	104.2	58.60	5,755.7	-757.4	412.6	234.9	177.67	2.322		
13,300.0	7,486.0	13,038.0	7,270.0	107.0	106.0	58.60	5,855.7	-757.4	412.6	232.0	180.65	2.284		
13,400.0	7,486.0	13,138.0	7,270.0	108.7	107.7	58.60	5,955.7	-757.4	412.6	229.0	183.63	2.247		
13,500.0	7,486.0	13,238.0	7,270.0	110.4	109.4	58.60	6,055.7	-757.4	412.6	226.0	186.61	2.211		
13,600.0	7,486.0	13,338.0	7,270.0	112.1	111.2	58.60	6,155.7	-757.4	412.6	223.0	189.59	2.176		
13,700.0	7,486.0	13,438.0	7,270.0	113.9	112.9	58.60	6,255.7	-757.4	412.6	220.0	192.57	2.143		
13,800.0	7,486.0	13,538.0	7,270.0	115.6	114.6	58.60	6,355.7	-757.4	412.6	217.1	195.56	2.110		
13,900.0	7,486.0	13,638.0	7,270.0	117.3	116.3	58.60	6,455.7	-757.4	412.6	214.1	198.54	2.078		
14,000.0	7,486.0	13,738.0	7,270.0	119.0	118.1	58.60	6,555.7	-757.4	412.6	211.1	201.52	2.047		
14,100.0	7,486.0	13,838.0	7,270.0	120.7	119.8	58.60	6,655.7	-757.4	412.6	208.1	204.51	2.018		
14,200.0	7,486.0	13,938.0	7,270.0	122.5	121.5	58.60	6,755.7	-757.4	412.6	205.1	207.49	1.989		
14,300.0	7,486.0	14,038.0	7,270.0	124.2	123.3	58.60	6,855.7	-757.4	412.6	202.1	210.48	1.960		
14,400.0	7,486.0	14,138.0	7,270.0	125.9	125.0	58.60	6,955.7	-757.4	412.6	199.1	213.46	1.933		
14,500.0	7,486.0	14,238.0	7,270.0	127.6	126.7	58.60	7,055.7	-757.4	412.6	196.2	216.45	1.906		
14,543.8	7,486.0	14,281.8	7,270.0	128.4	127.5	58.60	7,099.5	-757.4	412.6	194.9	217.76	1.895		
14,562.4	7,486.0	14,293.1	7,270.0	128.7	127.7	58.60	7,110.8	-757.4	412.7	194.5	218.20	1.891 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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)				
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	19.6	19.6					
100.0	100.0	99.0	99.0	0.2	0.2	90.05	0.0	19.6	19.6	19.3	0.30	64.767		
200.0	200.0	199.0	199.0	0.3	0.3	90.05	0.0	19.6	19.6	18.9	0.65	30.062		
300.0	300.0	299.0	299.0	0.5	0.5	90.05	0.0	19.6	19.6	18.6	1.00	19.569		
400.0	400.0	399.0	399.0	0.7	0.7	90.05	0.0	19.6	19.6	18.2	1.35	14.506 CC, ES		
500.0	500.0	499.0	499.0	0.9	0.8	-173.87	0.0	19.6	20.4	18.7	1.70	12.036		
600.0	600.0	599.0	599.0	1.0	1.0	-174.56	0.0	19.6	23.0	21.0	2.05	11.259		
700.0	699.9	699.3	699.3	1.2	1.2	-174.97	-0.3	18.7	26.6	24.2	2.40	11.088		
800.0	799.7	799.7	799.7	1.4	1.4	-174.73	-1.0	16.2	30.1	27.4	2.74	10.977		
900.0	899.4	900.2	900.1	1.6	1.6	-174.04	-2.2	12.0	33.7	30.6	3.09	10.904		
1,000.0	998.9	1,000.6	1,000.3	1.8	1.7	-173.05	-3.9	6.1	37.4	34.0	3.44	10.871 SF		
1,100.0	1,098.3	1,100.5	1,099.9	2.1	1.9	-172.34	-5.7	-0.2	42.3	38.5	3.79	11.163		
1,200.0	1,197.4	1,200.3	1,199.5	2.3	2.1	-172.06	-7.5	-6.6	49.0	44.8	4.14	11.824		
1,300.0	1,296.3	1,299.9	1,298.9	2.6	2.3	-172.10	-9.3	-12.9	57.3	52.8	4.49	12.769		
1,400.0	1,395.0	1,399.4	1,398.2	2.9	2.5	-172.31	-11.2	-19.3	67.3	62.4	4.84	13.901		
1,500.0	1,493.6	1,498.9	1,497.5	3.3	2.7	-172.50	-13.0	-25.6	77.5	72.3	5.19	14.929		
1,600.0	1,592.2	1,598.4	1,596.7	3.6	2.9	-172.65	-14.8	-31.9	87.7	82.2	5.54	15.825		
1,700.0	1,690.8	1,697.8	1,696.0	3.9	3.1	-172.77	-16.6	-38.3	98.0	92.1	5.90	16.614		
1,800.0	1,789.4	1,797.3	1,795.2	4.2	3.3	-172.86	-18.4	-44.6	108.2	102.0	6.25	17.313		
1,900.0	1,888.0	1,896.8	1,894.5	4.6	3.5	-172.94	-20.2	-51.0	118.5	111.9	6.61	17.938		
2,000.0	1,986.6	1,996.3	1,993.7	4.9	3.8	-173.01	-22.1	-57.3	128.7	121.8	6.96	18.499		
2,100.0	2,085.2	2,095.7	2,093.0	5.2	4.0	-173.06	-23.9	-63.6	139.0	131.7	7.31	19.005		
2,200.0	2,183.8	2,195.2	2,192.3	5.5	4.2	-173.11	-25.7	-70.0	149.2	141.5	7.67	19.465		
2,300.0	2,282.4	2,294.7	2,291.5	5.9	4.4	-173.16	-27.5	-76.3	159.5	151.4	8.02	19.884		
2,400.0	2,381.0	2,394.2	2,390.8	6.2	4.6	-173.19	-29.3	-82.7	169.7	161.3	8.37	20.268		
2,500.0	2,479.6	2,493.6	2,490.0	6.6	4.8	-173.23	-31.2	-89.0	180.0	171.2	8.73	20.621		
2,600.0	2,578.2	2,593.1	2,589.3	6.9	5.0	-173.25	-33.0	-95.3	190.2	181.1	9.08	20.946		
2,700.0	2,676.8	2,692.6	2,688.5	7.2	5.2	-173.28	-34.8	-101.7	200.4	191.0	9.43	21.246		
2,800.0	2,775.4	2,792.0	2,787.8	7.6	5.4	-173.31	-36.6	-108.0	210.7	200.9	9.79	21.525		
2,900.0	2,874.0	2,891.5	2,887.0	7.9	5.6	-173.33	-38.4	-114.3	220.9	210.8	10.14	21.785		
3,000.0	2,972.6	2,991.0	2,986.3	8.2	5.8	-173.35	-40.2	-120.7	231.2	220.7	10.50	22.027		
3,100.0	3,071.2	3,090.5	3,085.5	8.6	6.0	-173.36	-42.1	-127.0	241.4	230.6	10.85	22.253		
3,200.0	3,169.8	3,189.9	3,184.8	8.9	6.2	-173.38	-43.9	-133.4	251.7	240.5	11.20	22.465		
3,300.0	3,268.4	3,289.4	3,284.1	9.3	6.4	-173.40	-45.7	-139.7	261.9	250.4	11.56	22.664		
3,400.0	3,367.0	3,388.9	3,383.3	9.6	6.6	-173.41	-47.5	-146.0	272.2	260.3	11.91	22.851		
3,500.0	3,465.6	3,488.4	3,482.6	9.9	6.9	-173.42	-49.3	-152.4	282.4	270.1	12.26	23.027		
3,600.0	3,564.2	3,587.8	3,581.8	10.3	7.1	-173.44	-51.2	-158.7	292.7	280.0	12.62	23.193		
3,700.0	3,662.8	3,687.3	3,681.1	10.6	7.3	-173.45	-53.0	-165.1	302.9	289.9	12.97	23.350		
3,800.0	3,761.4	3,786.8	3,780.3	11.0	7.5	-173.46	-54.8	-171.4	313.1	299.8	13.33	23.499		
3,900.0	3,860.0	3,886.3	3,879.6	11.3	7.7	-173.47	-56.6	-177.7	323.4	309.7	13.68	23.641		
4,000.0	3,958.6	3,985.7	3,978.8	11.6	7.9	-173.48	-58.4	-184.1	333.6	319.6	14.03	23.775		
4,100.0	4,057.2	4,085.2	4,078.1	12.0	8.1	-173.49	-60.2	-190.4	343.9	329.5	14.39	23.902		
4,200.0	4,155.8	4,184.7	4,177.3	12.3	8.3	-173.49	-62.1	-196.8	354.1	339.4	14.74	24.023		
4,300.0	4,254.4	4,284.2	4,276.6	12.7	8.5	-173.50	-63.9	-203.1	364.4	349.3	15.09	24.139		
4,400.0	4,353.0	4,383.6	4,375.9	13.0	8.7	-173.51	-65.7	-209.4	374.6	359.2	15.45	24.249		
4,500.0	4,451.6	4,483.1	4,475.1	13.3	8.9	-173.52	-67.5	-215.8	384.9	369.1	15.80	24.355		
4,600.0	4,550.2	4,582.6	4,574.4	13.7	9.1	-173.52	-69.3	-222.1	395.1	379.0	16.16	24.456		
4,700.0	4,648.8	4,682.0	4,673.6	14.0	9.3	-173.53	-71.1	-228.5	405.4	388.9	16.51	24.552		
4,800.0	4,747.4	4,781.5	4,772.9	14.4	9.5	-173.54	-73.0	-234.8	415.6	398.7	16.86	24.644		
4,900.0	4,846.0	4,881.0	4,872.1	14.7	9.8	-173.54	-74.8	-241.1	425.9	408.6	17.22	24.733		
5,000.0	4,944.6	4,980.5	4,971.4	15.1	10.0	-173.55	-76.6	-247.5	436.1	418.5	17.57	24.818		
5,100.0	5,043.2	5,079.9	5,070.6	15.4	10.2	-173.55	-78.4	-253.8	446.3	428.4	17.93	24.900		

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 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,141.8	5,179.4	5,169.9	15.7	10.4	-173.56	-80.2	-260.1	456.6	438.3	18.28	24.978	
5,300.0	5,240.4	5,278.9	5,269.2	16.1	10.6	-173.56	-82.1	-266.5	466.8	448.2	18.63	25.054	
5,400.0	5,339.0	5,378.4	5,368.4	16.4	10.8	-173.57	-83.9	-272.8	477.1	458.1	18.99	25.126	
5,500.0	5,437.6	5,477.8	5,467.7	16.8	11.0	-173.57	-85.7	-279.2	487.3	468.0	19.34	25.196	
5,600.0	5,536.2	5,577.3	5,566.9	17.1	11.2	-173.57	-87.5	-285.5	497.6	477.9	19.70	25.264	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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		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	99.0	99.0	0.2	0.2	90.05	0.0	30.8	30.8	30.5	0.30	101.777		
200.0	200.0	199.0	199.0	0.3	0.3	90.05	0.0	30.8	30.8	30.1	0.65	47.240		
300.0	300.0	299.0	299.0	0.5	0.5	90.05	0.0	30.8	30.8	29.8	1.00	30.752		
400.0	400.0	399.0	399.0	0.7	0.7	90.05	0.0	30.8	30.8	29.4	1.35	22.795 CC, ES		
500.0	500.0	499.0	499.0	0.9	0.8	-173.78	0.0	30.8	31.6	29.9	1.70	18.622		
600.0	600.0	599.0	599.0	1.0	1.0	-174.25	0.0	30.8	34.2	32.2	2.05	16.723		
700.0	699.9	698.9	698.9	1.2	1.2	-174.89	0.0	30.8	38.6	36.2	2.39	16.107 SF		
800.0	799.7	798.7	798.7	1.4	1.4	-175.59	0.0	30.8	44.7	41.9	2.74	16.287		
900.0	899.4	898.4	898.4	1.6	1.5	-176.24	0.0	30.8	52.5	49.4	3.09	16.995		
1,000.0	998.9	997.9	997.9	1.8	1.7	-176.82	0.0	30.8	62.0	58.6	3.43	18.074		
1,100.0	1,098.3	1,097.3	1,097.3	2.1	1.9	-177.30	0.0	30.8	73.3	69.6	3.78	19.423		
1,200.0	1,197.4	1,196.4	1,196.4	2.3	2.1	-177.70	0.0	30.8	86.4	82.3	4.12	20.976		
1,300.0	1,296.3	1,295.3	1,295.3	2.6	2.2	-178.03	0.0	30.8	101.2	96.7	4.46	22.686		
1,400.0	1,395.0	1,394.0	1,394.0	2.9	2.4	-178.31	0.0	30.8	117.5	112.7	4.80	24.477		
1,500.0	1,493.6	1,492.6	1,492.6	3.3	2.6	-178.52	0.0	30.8	134.2	129.0	5.15	26.068		
1,600.0	1,592.2	1,591.2	1,591.2	3.6	2.8	-178.68	0.0	30.8	150.8	145.3	5.49	27.460		
1,700.0	1,690.8	1,689.8	1,689.8	3.9	2.9	-178.81	0.0	30.8	167.5	161.7	5.84	28.687		
1,800.0	1,789.4	1,788.4	1,788.4	4.2	3.1	-178.92	0.0	30.8	184.2	178.0	6.18	29.776		
1,900.0	1,888.0	1,887.0	1,887.0	4.6	3.3	-179.01	0.0	30.8	200.8	194.3	6.53	30.751		
2,000.0	1,986.6	1,985.6	1,985.6	4.9	3.4	-179.08	0.0	30.8	217.5	210.6	6.88	31.628		
2,100.0	2,085.2	2,084.2	2,084.2	5.2	3.6	-179.15	0.0	30.8	234.2	226.9	7.22	32.421		
2,200.0	2,183.8	2,182.8	2,182.8	5.5	3.8	-179.21	0.0	30.8	250.8	243.3	7.57	33.142		
2,300.0	2,282.4	2,281.4	2,281.4	5.9	4.0	-179.26	0.0	30.8	267.5	259.6	7.91	33.799		
2,400.0	2,381.0	2,380.0	2,380.0	6.2	4.1	-179.30	0.0	30.8	284.2	275.9	8.26	34.402		
2,500.0	2,479.6	2,478.6	2,478.6	6.6	4.3	-179.34	0.0	30.8	300.8	292.2	8.61	34.956		
2,600.0	2,578.2	2,577.2	2,577.2	6.9	4.5	-179.37	0.0	30.8	317.5	308.5	8.95	35.468		
2,700.0	2,676.8	2,675.8	2,675.8	7.2	4.6	-179.40	0.0	30.8	334.1	324.9	9.30	35.942		
2,800.0	2,775.4	2,774.4	2,774.4	7.6	4.8	-179.43	0.0	30.8	350.8	341.2	9.64	36.381		
2,900.0	2,874.0	2,873.0	2,873.0	7.9	5.0	-179.46	0.0	30.8	367.5	357.5	9.99	36.791		
3,000.0	2,972.6	2,971.6	2,971.6	8.2	5.2	-179.48	0.0	30.8	384.1	373.8	10.33	37.173		
3,100.0	3,071.2	3,070.2	3,070.2	8.6	5.3	-179.50	0.0	30.8	400.8	390.1	10.68	37.530		
3,200.0	3,169.8	3,168.8	3,168.8	8.9	5.5	-179.52	0.0	30.8	417.5	406.5	11.03	37.865		
3,300.0	3,268.4	3,267.4	3,267.4	9.3	5.7	-179.54	0.0	30.8	434.1	422.8	11.37	38.179		
3,400.0	3,367.0	3,366.0	3,366.0	9.6	5.9	-179.56	0.0	30.8	450.8	439.1	11.72	38.475		
3,500.0	3,465.6	3,464.6	3,464.6	9.9	6.0	-179.57	0.0	30.8	467.5	455.4	12.06	38.754		
3,600.0	3,564.2	3,563.2	3,563.2	10.3	6.2	-179.59	0.0	30.8	484.1	471.7	12.41	39.018		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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	41.9	41.9					
100.0	100.0	99.0	99.0	0.2	0.2	90.05	0.0	41.9	41.9	41.6	0.30	138.787		
200.0	200.0	199.0	199.0	0.3	0.3	90.05	0.0	41.9	41.9	41.3	0.65	64.419		
300.0	300.0	299.0	299.0	0.5	0.5	90.05	0.0	41.9	41.9	40.9	1.00	41.934		
400.0	400.0	399.0	399.0	0.7	0.7	90.05	0.0	41.9	41.9	40.6	1.35	31.084 CC, ES		
500.0	500.0	499.0	499.0	0.9	0.8	-173.73	0.0	41.9	42.8	41.1	1.70	25.208		
600.0	600.0	598.3	598.2	1.0	1.0	-173.62	-0.4	42.7	46.2	44.1	2.05	22.571		
700.0	699.9	697.3	697.2	1.2	1.2	-172.90	-1.5	45.0	52.8	50.4	2.39	22.078 SF		
800.0	799.7	796.5	796.4	1.4	1.4	-172.03	-3.3	48.5	62.4	59.7	2.74	22.786		
900.0	899.4	895.8	895.6	1.6	1.6	-171.56	-5.0	52.1	73.8	70.8	3.09	23.925		
1,000.0	998.9	995.0	994.7	1.8	1.7	-171.38	-6.8	55.7	87.0	83.5	3.43	25.338		
1,100.0	1,098.3	1,093.9	1,093.5	2.1	1.9	-171.39	-8.6	59.2	101.8	98.0	3.78	26.952		
1,200.0	1,197.4	1,192.5	1,192.0	2.3	2.1	-171.51	-10.3	62.8	118.4	114.3	4.12	28.717		
1,300.0	1,296.3	1,290.8	1,290.3	2.6	2.3	-171.71	-12.1	66.4	136.6	132.2	4.47	30.600		
1,400.0	1,395.0	1,388.8	1,388.2	2.9	2.5	-171.95	-13.8	69.9	156.4	151.6	4.81	32.527		
1,500.0	1,493.6	1,486.8	1,486.1	3.3	2.7	-172.16	-15.6	73.5	176.6	171.4	5.16	34.226		
1,600.0	1,592.2	1,584.7	1,584.0	3.6	2.8	-172.33	-17.3	77.0	196.7	191.2	5.51	35.709		
1,700.0	1,690.8	1,682.7	1,681.8	3.9	3.0	-172.46	-19.1	80.5	216.8	210.9	5.86	37.016		
1,800.0	1,789.4	1,780.6	1,779.7	4.2	3.2	-172.58	-20.8	84.1	236.9	230.7	6.21	38.175		
1,900.0	1,888.0	1,878.6	1,877.6	4.6	3.4	-172.67	-22.6	87.6	257.0	250.5	6.55	39.211		
2,000.0	1,986.6	1,976.5	1,975.5	4.9	3.6	-172.76	-24.3	91.2	277.1	270.2	6.90	40.142		
2,100.0	2,085.2	2,074.5	2,073.3	5.2	3.8	-172.83	-26.0	94.7	297.3	290.0	7.25	40.984		
2,200.0	2,183.8	2,172.5	2,171.2	5.5	3.9	-172.89	-27.8	98.3	317.4	309.8	7.60	41.748		
2,300.0	2,282.4	2,270.4	2,269.1	5.9	4.1	-172.94	-29.5	101.8	337.5	329.5	7.95	42.445		
2,400.0	2,381.0	2,368.4	2,367.0	6.2	4.3	-172.99	-31.3	105.3	357.6	349.3	8.30	43.083		
2,500.0	2,479.6	2,466.3	2,464.8	6.6	4.5	-173.03	-33.0	108.9	377.7	369.1	8.65	43.670		
2,600.0	2,578.2	2,564.3	2,562.7	6.9	4.7	-173.07	-34.8	112.4	397.9	388.9	9.00	44.211		
2,700.0	2,676.8	2,662.2	2,660.6	7.2	4.9	-173.11	-36.5	116.0	418.0	408.6	9.35	44.712		
2,800.0	2,775.4	2,760.2	2,758.5	7.6	5.0	-173.14	-38.3	119.5	438.1	428.4	9.70	45.177		
2,900.0	2,874.0	2,858.1	2,856.3	7.9	5.2	-173.17	-40.0	123.1	458.2	448.2	10.05	45.609		
3,000.0	2,972.6	2,956.1	2,954.2	8.2	5.4	-173.20	-41.8	126.6	478.3	467.9	10.40	46.012		
3,100.0	3,071.2	3,054.1	3,052.1	8.6	5.6	-173.22	-43.5	130.2	498.5	487.7	10.74	46.389		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 31-18 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error: 0.0 ft
Survey Program: 8078-Geolink MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,100.0	7,486.0	7,464.0	7,464.0	38.6	13.0	-90.00	1,741.3	-1,579.5	477.6	431.3	46.34	10.308	
9,185.6	7,486.0	7,464.0	7,464.0	39.9	13.0	-90.00	1,741.3	-1,579.5	469.9	422.2	47.73	9.845 CC	
9,200.0	7,486.0	7,464.0	7,464.0	40.1	13.0	-90.00	1,741.3	-1,579.5	470.1	422.2	47.96	9.802 ES	
9,300.0	7,486.0	7,464.0	7,464.0	41.5	13.0	-90.00	1,741.3	-1,579.5	483.6	434.0	49.60	9.750 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 32-18J (EXISTING) - MACHII-ROSS WELL - NO SURVEYS				Offset Site Error:		0.0 ft	
Survey Program:				8100-Geolink MWD								Offset Well Error:		0.0 ft			
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor					
7,300.0	7,199.7	7,205.7	7,205.7	22.8	12.6	-42.99	233.2	-1,448.2	472.5	445.6	26.87	17.585					
7,400.0	7,280.8	7,286.8	7,286.8	23.1	12.7	-56.28	233.2	-1,448.2	430.5	404.9	25.55	16.848					
7,500.0	7,351.0	7,357.0	7,357.0	23.4	12.8	-69.83	233.2	-1,448.2	389.2	363.6	25.57	15.218					
7,600.0	7,408.1	7,414.1	7,414.1	23.8	12.9	-81.97	233.2	-1,448.2	357.3	330.7	26.69	13.388					
7,694.7	7,448.6	7,454.6	7,454.6	24.2	13.0	-90.00	233.2	-1,448.2	345.6	317.9	27.69	12.481	CC, ES				
7,700.0	7,450.4	7,456.4	7,456.4	24.3	13.0	-90.32	233.2	-1,448.2	345.6	317.9	27.73	12.465	SF				
7,800.0	7,476.6	7,482.6	7,482.6	24.8	13.1	-93.35	233.2	-1,448.2	361.8	333.3	28.41	12.733					
7,900.0	7,486.0	7,492.0	7,492.0	25.4	13.1	-90.28	233.2	-1,448.2	405.2	376.0	29.15	13.898					
8,000.0	7,486.0	7,492.0	7,492.0	26.1	13.1	-90.00	233.2	-1,448.2	467.6	437.4	30.26	15.453					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	79.10	12.8	66.3	68.7					
100.0	100.0	87.0	87.0	0.2	0.2	79.10	12.8	66.3	67.5	67.2	0.30	222.052		
200.0	200.0	187.0	187.0	0.3	0.3	79.10	12.8	66.3	67.5	66.8	0.65	103.344		
300.0	300.0	287.0	287.0	0.5	0.5	79.10	12.8	66.3	67.5	66.5	1.00	67.343		
400.0	400.0	387.0	387.0	0.7	0.7	79.10	12.8	66.3	67.5	66.1	1.35	49.944 CC, ES		
500.0	500.0	487.0	487.0	0.9	0.9	175.51	12.8	66.3	68.3	66.6	1.70	40.206		
600.0	600.0	587.0	587.0	1.0	1.0	175.67	12.8	66.3	71.0	68.9	2.05	34.640		
700.0	699.9	686.9	686.9	1.2	1.2	175.92	12.8	66.3	75.3	72.9	2.40	31.427		
800.0	799.7	786.7	786.7	1.4	1.4	176.22	12.8	66.3	81.4	78.7	2.74	29.671		
900.0	899.4	886.4	886.4	1.6	1.5	176.55	12.8	66.3	89.2	86.1	3.09	28.881		
1,000.0	998.9	985.9	985.9	1.8	1.7	176.88	12.8	66.3	98.8	95.4	3.43	28.765 SF		
1,100.0	1,098.3	1,085.3	1,085.3	2.1	1.9	177.19	12.8	66.3	110.1	106.3	3.78	29.141		
1,200.0	1,197.4	1,184.4	1,184.4	2.3	2.1	177.48	12.8	66.3	123.1	119.0	4.12	29.885		
1,300.0	1,296.3	1,283.3	1,283.3	2.6	2.2	177.75	12.8	66.3	137.9	133.4	4.46	30.914		
1,400.0	1,395.0	1,382.0	1,382.0	2.9	2.4	177.98	12.8	66.3	154.3	149.5	4.80	32.117		
1,500.0	1,493.6	1,480.6	1,480.6	3.3	2.6	178.18	12.8	66.3	170.9	165.8	5.15	33.193		
1,600.0	1,592.2	1,579.2	1,579.2	3.6	2.8	178.34	12.8	66.3	187.6	182.1	5.50	34.135		
1,700.0	1,690.8	1,677.8	1,677.8	3.9	2.9	178.48	12.8	66.3	204.2	198.4	5.84	34.965		
1,800.0	1,789.4	1,776.4	1,776.4	4.2	3.1	178.59	12.8	66.3	220.9	214.7	6.19	35.703		
1,900.0	1,888.0	1,875.0	1,875.0	4.6	3.3	178.69	12.8	66.3	237.6	231.0	6.53	36.364		
2,000.0	1,986.6	1,973.6	1,973.6	4.9	3.4	178.78	12.8	66.3	254.2	247.3	6.88	36.958		
2,100.0	2,085.2	2,072.2	2,072.2	5.2	3.6	178.85	12.8	66.3	270.9	263.7	7.22	37.495		
2,200.0	2,183.8	2,170.8	2,170.8	5.5	3.8	178.92	12.8	66.3	287.6	280.0	7.57	37.984		
2,300.0	2,282.4	2,269.4	2,269.4	5.9	4.0	178.98	12.8	66.3	304.2	296.3	7.92	38.429		
2,400.0	2,381.0	2,368.0	2,368.0	6.2	4.1	179.03	12.8	66.3	320.9	312.6	8.26	38.838		
2,500.0	2,479.6	2,466.6	2,466.6	6.6	4.3	179.08	12.8	66.3	337.5	328.9	8.61	39.214		
2,600.0	2,578.2	2,565.2	2,565.2	6.9	4.5	179.12	12.8	66.3	354.2	345.3	8.95	39.561		
2,700.0	2,676.8	2,663.8	2,663.8	7.2	4.6	179.16	12.8	66.3	370.9	361.6	9.30	39.882		
2,800.0	2,775.4	2,762.4	2,762.4	7.6	4.8	179.20	12.8	66.3	387.5	377.9	9.64	40.181		
2,900.0	2,874.0	2,861.0	2,861.0	7.9	5.0	179.23	12.8	66.3	404.2	394.2	9.99	40.458		
3,000.0	2,972.6	2,959.6	2,959.6	8.2	5.2	179.26	12.8	66.3	420.9	410.5	10.34	40.717		
3,100.0	3,071.2	3,058.2	3,058.2	8.6	5.3	179.29	12.8	66.3	437.5	426.9	10.68	40.960		
3,200.0	3,169.8	3,156.8	3,156.8	8.9	5.5	179.32	12.8	66.3	454.2	443.2	11.03	41.187		
3,300.0	3,268.4	3,255.4	3,255.4	9.3	5.7	179.34	12.8	66.3	470.9	459.5	11.37	41.400		
3,400.0	3,367.0	3,354.0	3,354.0	9.6	5.9	179.36	12.8	66.3	487.5	475.8	11.72	41.601		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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	85.96	6.2	87.8	89.8					
100.0	100.0	82.2	82.2	0.2	0.2	86.08	6.0	87.7	87.9	87.6	0.30	293.579		
200.0	200.0	182.5	182.5	0.3	0.4	86.57	5.2	87.3	87.4	86.8	0.65	133.848		
300.0	300.0	282.8	282.8	0.5	0.6	87.43	3.9	86.6	86.7	85.7	1.01	86.105		
400.0	400.0	383.1	383.0	0.7	0.8	88.70	1.9	85.6	85.6	84.2	1.36	62.994		
481.4	481.4	464.7	464.6	0.8	0.9	-173.65	-0.1	84.5	85.1	83.4	1.72	49.558 CC		
500.0	500.0	483.3	483.2	0.9	1.0	-173.32	-0.6	84.2	85.1	83.3	1.79	47.658 ES		
600.0	600.0	583.5	583.4	1.0	1.2	-171.45	-3.7	82.6	86.2	84.0	2.16	39.933		
700.0	699.9	683.7	683.4	1.2	1.4	-169.44	-7.4	80.7	88.7	86.2	2.53	35.076		
800.0	799.7	783.8	783.4	1.4	1.6	-167.39	-11.6	78.5	92.9	90.0	2.90	31.994		
900.0	899.4	883.5	883.0	1.6	1.8	-165.43	-16.5	76.0	98.7	95.4	3.28	30.093		
1,000.0	998.9	983.0	982.4	1.8	1.9	-164.11	-21.0	73.7	106.4	102.7	3.65	29.162		
1,100.0	1,098.3	1,082.5	1,081.8	2.1	2.1	-163.35	-25.3	71.6	115.9	111.9	4.02	28.852 SF		
1,200.0	1,197.4	1,183.8	1,183.0	2.3	2.3	-163.23	-28.8	69.0	126.5	122.2	4.37	28.957		
1,300.0	1,296.3	1,285.7	1,284.7	2.6	2.5	-164.10	-30.3	64.9	137.0	132.3	4.71	29.070		
1,400.0	1,395.0	1,382.2	1,381.2	2.9	2.6	-165.69	-29.9	61.2	149.0	144.0	5.02	29.689		
1,500.0	1,493.6	1,477.9	1,476.9	3.3	2.8	-167.73	-27.9	59.6	163.4	158.1	5.32	30.704		
1,600.0	1,592.2	1,578.2	1,577.1	3.6	2.9	-169.86	-24.8	59.1	179.0	173.3	5.64	31.741		
1,700.0	1,690.8	1,676.9	1,675.8	3.9	3.1	-171.27	-22.8	57.0	193.3	187.3	5.97	32.373		
1,800.0	1,789.4	1,770.5	1,769.4	4.2	3.2	-172.03	-22.5	56.8	209.5	203.2	6.31	33.216		
1,900.0	1,888.0	1,864.4	1,863.2	4.6	3.4	-172.33	-23.5	58.8	228.1	221.5	6.65	34.320		
2,000.0	1,986.6	1,964.8	1,963.6	4.9	3.6	-172.52	-25.0	61.2	247.1	240.1	7.00	35.317		
2,100.0	2,085.2	2,066.5	2,065.2	5.2	3.7	-172.79	-26.0	62.7	265.0	257.7	7.34	36.086		
2,200.0	2,183.8	2,168.8	2,167.6	5.5	3.9	-173.17	-26.3	62.6	281.5	273.8	7.69	36.609		
2,300.0	2,282.4	2,265.3	2,264.1	5.9	4.1	-173.68	-25.6	62.4	297.8	289.8	8.02	37.145		
2,400.0	2,381.0	2,361.5	2,360.2	6.2	4.2	-174.35	-23.7	62.8	314.9	306.5	8.34	37.741		
2,500.0	2,479.6	2,461.3	2,460.0	6.6	4.4	-175.14	-20.9	63.5	332.2	323.6	8.67	38.306		
2,600.0	2,578.2	2,559.2	2,557.9	6.9	4.5	-175.88	-17.8	63.7	349.1	340.1	9.00	38.769		
2,700.0	2,676.8	2,646.9	2,645.5	7.2	4.7	-176.27	-16.3	65.5	367.8	358.5	9.33	39.427		
2,800.0	2,775.4	2,740.3	2,738.8	7.6	4.8	-176.36	-16.5	69.8	389.0	379.3	9.66	40.250		
2,900.0	2,874.0	2,841.6	2,840.0	7.9	5.0	-176.43	-16.8	74.3	409.9	399.9	10.01	40.933		
3,000.0	2,972.6	2,943.2	2,941.5	8.2	5.2	-176.56	-16.8	77.8	430.0	419.6	10.36	41.502		
3,100.0	3,071.2	3,045.1	3,043.4	8.6	5.4	-176.78	-16.0	80.4	449.2	438.4	10.70	41.957		
3,200.0	3,169.8	3,147.3	3,145.6	8.9	5.5	-177.06	-14.6	82.1	467.5	456.5	11.05	42.308		
3,300.0	3,268.4	3,247.8	3,246.0	9.3	5.7	-177.34	-13.1	83.1	485.2	473.8	11.40	42.578		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 31-7 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 400-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		
14,100.0	7,486.0	7,533.6	7,415.3	120.7	21.9	-89.59	7,033.4	-1,351.5	448.5	313.9	134.61	3.332		
14,200.0	7,486.0	7,534.0	7,415.6	122.5	21.9	-89.68	7,033.4	-1,351.5	368.2	231.9	136.35	2.701		
14,300.0	7,486.0	7,534.4	7,416.0	124.2	21.9	-89.76	7,033.4	-1,351.5	300.1	162.0	138.10	2.173		
14,400.0	7,486.0	7,534.7	7,416.4	125.9	21.9	-89.85	7,033.4	-1,351.5	254.0	114.2	139.84	1.816		
14,477.7	7,486.0	7,535.0	7,416.6	127.2	21.9	-89.92	7,033.4	-1,351.5	241.9	100.7	141.20	1.713	CC, ES, SF	
14,500.0	7,486.0	7,535.1	7,416.7	127.6	21.9	-89.94	7,033.4	-1,351.5	242.9	101.3	141.59	1.715		
14,562.4	7,486.0	7,535.3	7,417.0	128.7	21.9	-89.99	7,033.4	-1,351.5	256.3	113.6	142.67	1.796		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 32-7 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 7935-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		
12,600.0	7,486.0	7,417.0	7,417.0	95.1	12.9	-90.00	5,578.3	-1,321.3	472.6	366.6	105.97	4.460		
12,700.0	7,486.0	7,417.0	7,417.0	96.8	12.9	-90.00	5,578.3	-1,321.3	385.8	278.1	107.71	3.582		
12,800.0	7,486.0	7,417.0	7,417.0	98.5	12.9	-90.00	5,578.3	-1,321.3	307.1	197.7	109.45	2.806		
12,900.0	7,486.0	7,417.0	7,417.0	100.2	12.9	-90.00	5,578.3	-1,321.3	244.6	133.4	111.19	2.200		
13,000.0	7,486.0	7,417.0	7,417.0	101.9	12.9	-90.00	5,578.3	-1,321.3	212.9	99.9	112.93	1.885		
13,022.6	7,486.0	7,417.0	7,417.0	102.3	12.9	-90.00	5,578.3	-1,321.3	211.7	98.3	113.32	1.868	CC, ES, SF	
13,100.0	7,486.0	7,417.0	7,417.0	103.6	12.9	-90.00	5,578.3	-1,321.3	225.4	110.7	114.66	1.966		
13,200.0	7,486.0	7,417.0	7,417.0	105.3	12.9	-90.00	5,578.3	-1,321.3	276.2	159.8	116.41	2.373		
13,300.0	7,486.0	7,417.0	7,417.0	107.0	12.9	-90.00	5,578.3	-1,321.3	349.0	230.8	118.15	2.954		
13,400.0	7,486.0	7,417.0	7,417.0	108.7	12.9	-90.00	5,578.3	-1,321.3	432.7	312.8	119.89	3.609		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 33-7 (EXISTING) - ENCANA WELL - PLAN ONLY													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		
11,400.0	7,486.0	7,632.5	7,421.0	74.8	26.2	-90.00	4,268.8	-1,423.6	443.4	345.0	98.40	4.506		
11,500.0	7,486.0	7,632.5	7,421.0	76.5	26.2	-90.00	4,268.8	-1,423.6	379.5	279.3	100.12	3.790		
11,600.0	7,486.0	7,632.5	7,421.0	78.2	26.2	-90.00	4,268.8	-1,423.6	333.7	231.9	101.85	3.277		
11,700.0	7,486.0	7,632.5	7,421.0	79.8	26.2	-90.00	4,268.8	-1,423.6	314.2	210.7	103.58	3.034		
11,713.1	7,486.0	7,632.5	7,421.0	80.1	26.2	-90.00	4,268.8	-1,423.6	314.0	210.2	103.81	3.025 CC, ES, SF		
11,800.0	7,486.0	7,632.5	7,421.0	81.5	26.2	-90.00	4,268.8	-1,423.6	325.8	220.5	105.31	3.093		
11,900.0	7,486.0	7,632.5	7,421.0	83.2	26.2	-90.00	4,268.8	-1,423.6	365.4	258.3	107.04	3.413		
12,000.0	7,486.0	7,632.5	7,421.0	84.9	26.2	-90.00	4,268.8	-1,423.6	425.3	316.5	108.77	3.910		
12,100.0	7,486.0	7,632.5	7,421.0	86.6	26.2	-90.00	4,268.8	-1,423.6	498.3	387.7	110.51	4.509		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 34-7 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 676-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,000.0	7,486.0	7,588.1	7,460.1	52.1	22.8	-89.87	2,793.7	-1,493.5	451.7	380.7	71.03	6.359		
10,100.0	7,486.0	7,588.2	7,460.2	53.7	22.8	-89.88	2,793.7	-1,493.5	407.9	335.2	72.73	5.609		
10,200.0	7,486.0	7,588.3	7,460.3	55.2	22.8	-89.90	2,793.7	-1,493.5	385.8	311.4	74.42	5.184		
10,238.0	7,486.0	7,588.4	7,460.4	55.8	22.8	-89.91	2,793.7	-1,493.5	383.9	308.8	75.07	5.114 CC, ES		
10,300.0	7,486.0	7,588.5	7,460.4	56.8	22.8	-89.92	2,793.7	-1,493.5	388.9	312.7	76.12	5.108 SF		
10,400.0	7,486.0	7,588.6	7,460.6	58.4	22.8	-89.93	2,793.7	-1,493.5	416.7	338.8	77.83	5.354		
10,500.0	7,486.0	7,588.7	7,460.7	60.0	22.8	-89.95	2,793.7	-1,493.5	464.8	385.2	79.54	5.844		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 4-6-7 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8055-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		
8,900.0	7,486.0	7,467.0	7,467.0	35.9	13.0	-90.00	1,735.5	-1,513.0	490.9	447.8	43.13	11.381		
9,000.0	7,486.0	7,467.0	7,467.0	37.3	13.0	-90.00	1,735.5	-1,513.0	441.6	396.9	44.73	9.873		
9,100.0	7,486.0	7,467.0	7,467.0	38.6	13.0	-90.00	1,735.5	-1,513.0	411.2	364.8	46.34	8.873		
9,179.8	7,486.0	7,467.0	7,467.0	39.8	13.0	-90.00	1,735.5	-1,513.0	403.4	355.7	47.64	8.467	CC, ES	
9,200.0	7,486.0	7,467.0	7,467.0	40.1	13.0	-90.00	1,735.5	-1,513.0	403.9	355.9	47.97	8.420	SF	
9,300.0	7,486.0	7,467.0	7,467.0	41.5	13.0	-90.00	1,735.5	-1,513.0	420.9	371.3	49.61	8.485		
9,400.0	7,486.0	7,467.0	7,467.0	42.9	13.0	-90.00	1,735.5	-1,513.0	459.6	408.3	51.25	8.966		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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							
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
11,900.0	7,486.0	7,808.5	7,419.7	83.2	36.0	90.42	4,739.4	-737.6	467.9	351.2	116.71	4.009	
12,000.0	7,486.0	7,807.9	7,419.1	84.9	36.0	90.33	4,739.4	-737.6	414.9	296.5	118.44	3.503	
12,100.0	7,486.0	7,807.3	7,418.6	86.6	36.0	90.24	4,739.4	-737.6	381.3	261.2	120.17	3.173	
12,183.7	7,486.0	7,806.8	7,418.1	88.0	36.0	90.17	4,739.4	-737.6	372.1	250.4	121.63	3.059 CC, ES	
12,200.0	7,486.0	7,806.7	7,418.0	88.3	36.0	90.15	4,739.4	-737.6	372.4	250.5	121.91	3.055 SF	
12,300.0	7,486.0	7,806.2	7,417.4	90.0	36.0	90.06	4,739.4	-737.6	389.8	266.2	123.64	3.153	
12,400.0	7,486.0	7,805.6	7,416.8	91.7	36.0	89.97	4,739.4	-737.6	430.4	305.0	125.38	3.433	
12,500.0	7,486.0	7,805.0	7,416.2	93.4	36.0	89.88	4,739.4	-737.6	488.3	361.2	127.11	3.842	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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		
9,400.0	7,486.0	7,584.1	7,464.6	42.9	21.3	89.59	2,295.9	-774.6	477.5	422.6	54.84	8.707		
9,500.0	7,486.0	7,584.7	7,465.3	44.4	21.3	89.70	2,295.9	-774.6	412.2	355.7	56.50	7.296		
9,600.0	7,486.0	7,585.4	7,465.9	45.9	21.3	89.82	2,295.9	-774.6	363.2	305.0	58.16	6.244		
9,700.0	7,486.0	7,586.0	7,466.6	47.4	21.3	89.93	2,295.9	-774.6	337.4	277.6	59.84	5.639		
9,740.2	7,486.0	7,586.3	7,466.8	48.1	21.3	89.97	2,295.9	-774.6	335.0	274.5	60.51	5.536 CC, ES		
9,800.0	7,486.0	7,586.7	7,467.2	49.0	21.3	90.04	2,296.0	-774.6	340.3	278.8	61.51	5.532 SF		
9,900.0	7,486.0	7,587.3	7,467.9	50.5	21.3	90.15	2,296.0	-774.6	371.1	307.9	63.20	5.873		
10,000.0	7,486.0	7,588.0	7,468.6	52.1	21.3	90.27	2,296.0	-774.6	423.9	359.0	64.89	6.533		
10,100.0	7,486.0	7,588.7	7,469.2	53.7	21.3	90.38	2,296.0	-774.6	491.6	425.0	66.58	7.383		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 V 7-2 (EXISTING) - GERRITY OIL WELL - NO SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 8000-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		Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
							+N/-S (ft)	+E/-W (ft)						
14,100.0	7,486.0	7,405.0	7,405.0	120.7	12.9	-90.00	6,890.8	-1,496.7	452.9	320.8	132.07	3.429		
14,200.0	7,486.0	7,405.0	7,405.0	122.5	12.9	-90.00	6,890.8	-1,496.7	410.0	276.2	133.81	3.064		
14,300.0	7,486.0	7,405.0	7,405.0	124.2	12.9	-90.00	6,890.8	-1,496.7	388.7	253.2	135.55	2.868		
14,335.1	7,486.0	7,405.0	7,405.0	124.8	12.9	-90.00	6,890.8	-1,496.7	387.1	251.0	136.17	2.843	CC, ES, SF	
14,400.0	7,486.0	7,405.0	7,405.0	125.9	12.9	-90.00	6,890.8	-1,496.7	392.5	255.2	137.30	2.859		
14,500.0	7,486.0	7,405.0	7,405.0	127.6	12.9	-90.00	6,890.8	-1,496.7	420.8	281.7	139.04	3.026		
14,562.4	7,486.0	7,405.0	7,405.0	128.7	12.9	-90.00	6,890.8	-1,496.7	448.9	308.8	140.13	3.204		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 V 7-7 (EXISTING) - GERRITY OIL WELL - NO SURVEYS		Offset Site Error:		0.0 ft
Survey Program: 8000-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)							
12,800.0	7,486.0	7,404.0	7,404.0	98.5	12.9	-90.00	5,561.2	-1,522.0	460.7	351.3	109.42	4.210					
12,900.0	7,486.0	7,404.0	7,404.0	100.2	12.9	-90.00	5,561.2	-1,522.0	425.6	314.5	111.16	3.829					
13,000.0	7,486.0	7,404.0	7,404.0	101.9	12.9	-90.00	5,561.2	-1,522.0	412.4	299.5	112.90	3.653					
13,005.5	7,486.0	7,404.0	7,404.0	102.0	12.9	-90.00	5,561.2	-1,522.0	412.4	299.4	113.00	3.649	CC, ES, SF				
13,100.0	7,486.0	7,404.0	7,404.0	103.6	12.9	-90.00	5,561.2	-1,522.0	423.1	308.4	114.64	3.690					
13,200.0	7,486.0	7,404.0	7,404.0	105.3	12.9	-90.00	5,561.2	-1,522.0	455.9	339.6	116.38	3.918					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Kugel 1C-18H-H267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4961.0ft (Original Well Elev)
Reference Site:	S18-T2N-R67W	MD Reference:	WELL @ 4961.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Kugel 1C-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 @ 4961.0ft (Original Well Elev)

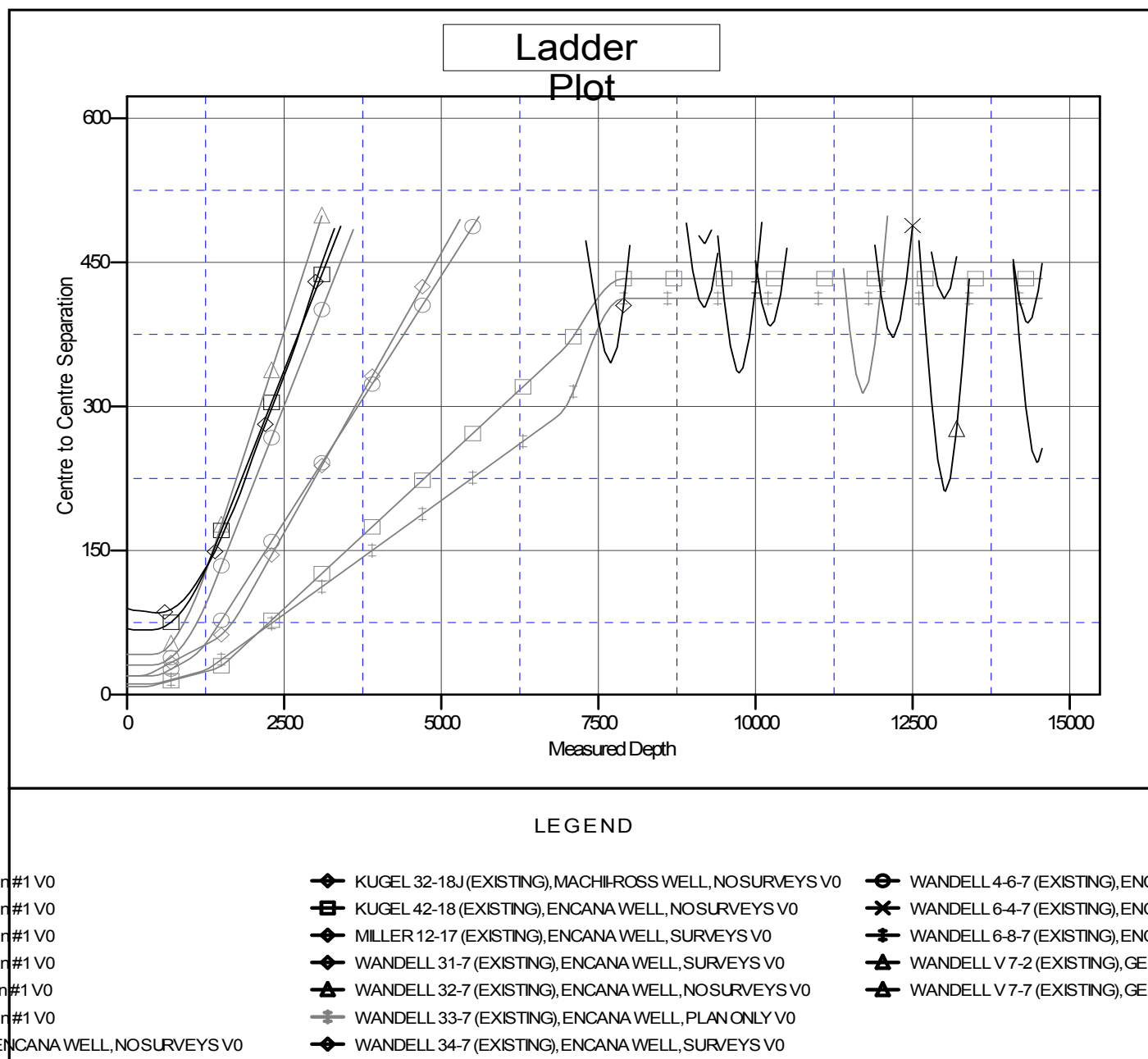
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

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

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.37°



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