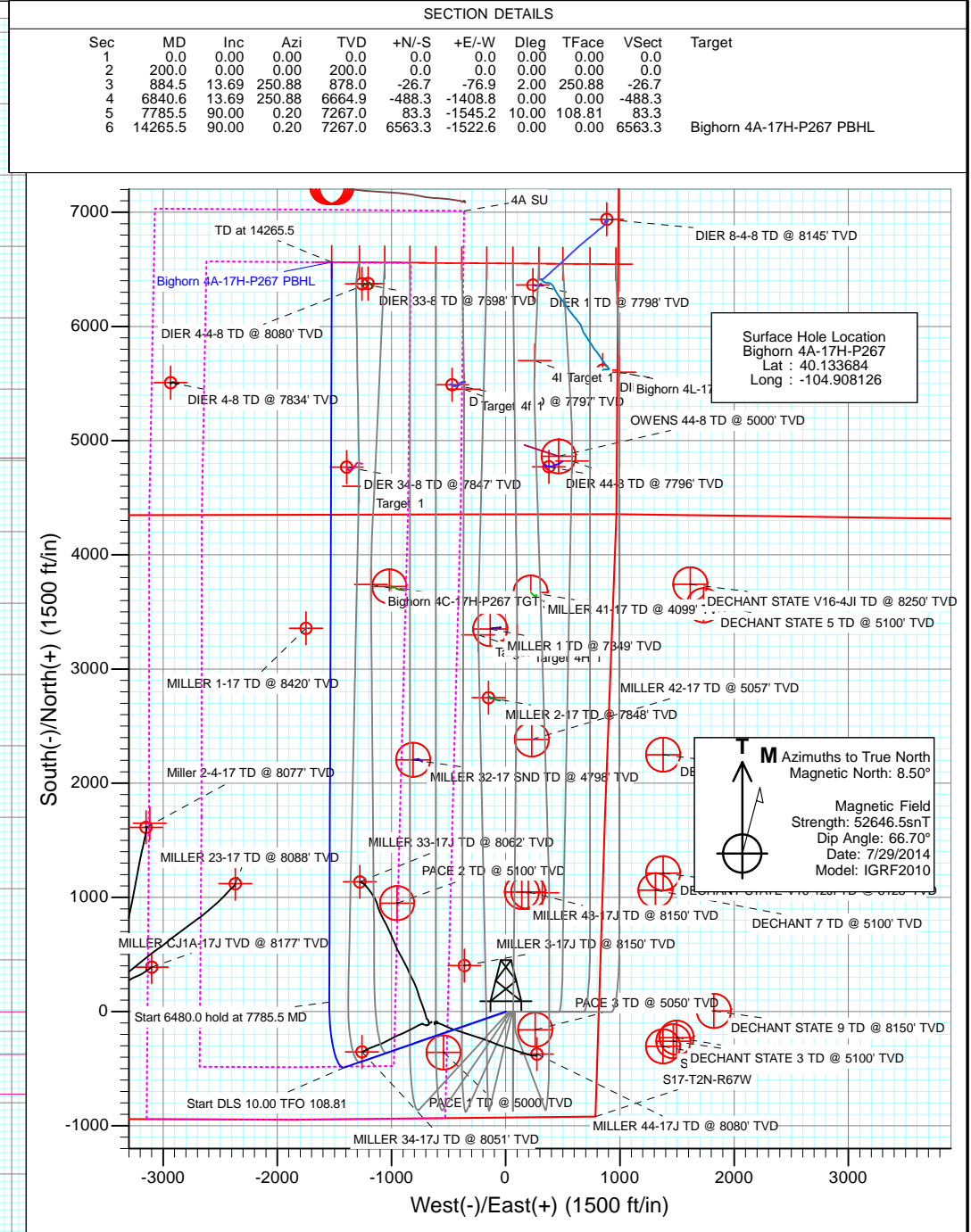
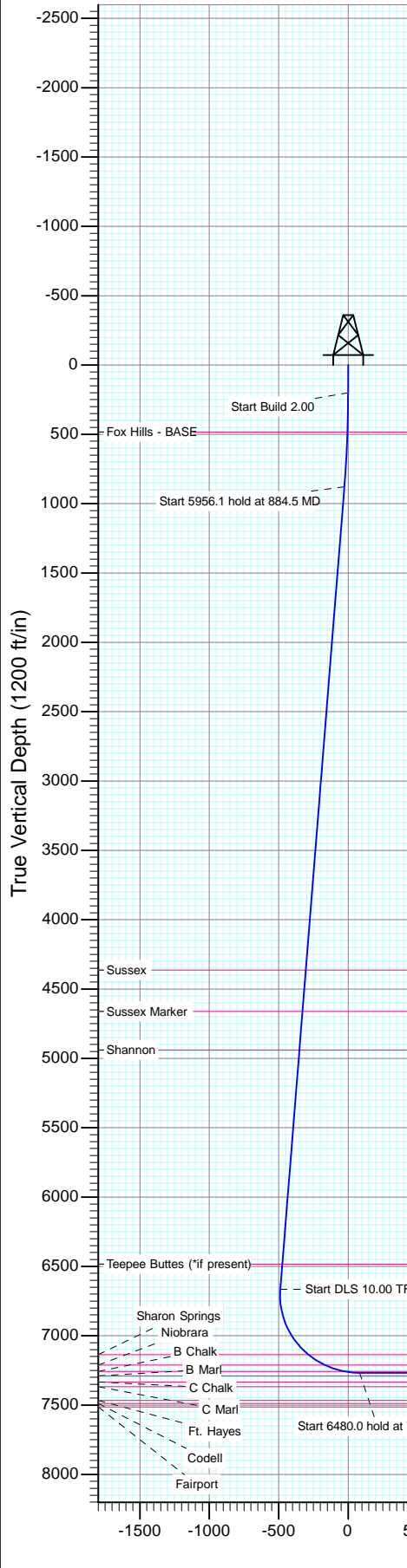




Project: DJ Wattenberg
Site: S17-T2N-R67W (Big Horn)
Well: Bighorn 4A-17H-P267
Wellbore: DD
Design: Plan #2



DESIGN TARGET DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Bighorn 4A-17H-P267 PBHL	6563.3	-1522.6	1298652.64	3163929.31	40.151701	-104.913573

Plan #2
Bighorn 4A-17H-P267
WELL @ 4983.0ft
Ground Elevation @ 4953.0
North American Datum 1983
Well Bighorn 4A-17H-P267, True North

Bighorn 4A-17H-P267 PBHL

TD at 14265.5

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4983.0ft
Project:	DJ Wattenberg	MD Reference:	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	North Reference:	True
Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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

Site		S17-T2N-R67W (Big Horn)			
Site Position:		Northing:	1,292,301.45 ft	Latitude:	40.134300
From:	Lat/Long	Easting:	3,162,073.61 ft	Longitude:	-104.920360
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.37 °

Well	Bighorn 4A-17H-P267					
Well Position	+N/-S	0.0 ft	Northing:	1,292,099.65 ft	Latitude:	40.133684
	+E/-W	0.0 ft	Easting:	3,165,495.69 ft	Longitude:	-104.908126
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,953.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/29/2014	8.50	66.70	52,646

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

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
884.5	13.69	250.88	878.0	-26.7	-76.9	2.00	2.00	0.00	250.88	
6,840.6	13.69	250.88	6,664.9	-488.3	-1,408.8	0.00	0.00	0.00	0.00	
7,785.5	90.00	0.20	7,267.0	83.3	-1,545.2	10.00	8.08	11.57	108.81	
14,265.5	90.00	0.20	7,267.0	6,563.3	-1,522.6	0.00	0.00	0.00	0.00	Bighorn 4A-17H-P267

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4983.0ft
Project:	DJ Wattenberg	MD Reference:	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	North Reference:	True
Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	Start Build 2.00
300.0	2.00	250.88	300.0	-0.6	-1.6	-0.6	2.00	2.00	
400.0	4.00	250.88	399.8	-2.3	-6.6	-2.3	2.00	2.00	
483.5	5.67	250.88	483.0	-4.6	-13.2	-4.6	2.00	2.00	Fox Hills - BASE
500.0	6.00	250.88	499.5	-5.1	-14.8	-5.1	2.00	2.00	
600.0	8.00	250.88	598.7	-9.1	-26.3	-9.1	2.00	2.00	
700.0	10.00	250.88	697.5	-14.3	-41.1	-14.3	2.00	2.00	
800.0	12.00	250.88	795.6	-20.5	-59.1	-20.5	2.00	2.00	
884.5	13.69	250.88	878.0	-26.7	-76.9	-26.7	2.00	2.00	Start 5956.1 hold at 884.5 MD
900.0	13.69	250.88	893.1	-27.9	-80.4	-27.9	0.00	0.00	
1,000.0	13.69	250.88	990.2	-35.6	-102.7	-35.6	0.00	0.00	
1,100.0	13.69	250.88	1,087.4	-43.4	-125.1	-43.4	0.00	0.00	
1,200.0	13.69	250.88	1,184.5	-51.1	-147.5	-51.1	0.00	0.00	
1,300.0	13.69	250.88	1,281.7	-58.9	-169.8	-58.9	0.00	0.00	
1,400.0	13.69	250.88	1,378.9	-66.6	-192.2	-66.6	0.00	0.00	
1,500.0	13.69	250.88	1,476.0	-74.4	-214.5	-74.4	0.00	0.00	
1,600.0	13.69	250.88	1,573.2	-82.1	-236.9	-82.1	0.00	0.00	
1,700.0	13.69	250.88	1,670.3	-89.9	-259.3	-89.9	0.00	0.00	
1,800.0	13.69	250.88	1,767.5	-97.6	-281.6	-97.6	0.00	0.00	
1,900.0	13.69	250.88	1,864.7	-105.4	-304.0	-105.4	0.00	0.00	
2,000.0	13.69	250.88	1,961.8	-113.1	-326.3	-113.1	0.00	0.00	
2,100.0	13.69	250.88	2,059.0	-120.9	-348.7	-120.9	0.00	0.00	
2,200.0	13.69	250.88	2,156.1	-128.6	-371.1	-128.6	0.00	0.00	
2,300.0	13.69	250.88	2,253.3	-136.4	-393.4	-136.4	0.00	0.00	
2,400.0	13.69	250.88	2,350.4	-144.1	-415.8	-144.1	0.00	0.00	
2,500.0	13.69	250.88	2,447.6	-151.9	-438.2	-151.9	0.00	0.00	
2,600.0	13.69	250.88	2,544.8	-159.6	-460.5	-159.6	0.00	0.00	
2,700.0	13.69	250.88	2,641.9	-167.4	-482.9	-167.4	0.00	0.00	
2,800.0	13.69	250.88	2,739.1	-175.1	-505.2	-175.1	0.00	0.00	
2,900.0	13.69	250.88	2,836.2	-182.9	-527.6	-182.9	0.00	0.00	
3,000.0	13.69	250.88	2,933.4	-190.6	-550.0	-190.6	0.00	0.00	
3,100.0	13.69	250.88	3,030.6	-198.4	-572.3	-198.4	0.00	0.00	
3,200.0	13.69	250.88	3,127.7	-206.1	-594.7	-206.1	0.00	0.00	
3,300.0	13.69	250.88	3,224.9	-213.9	-617.1	-213.9	0.00	0.00	
3,400.0	13.69	250.88	3,322.0	-221.6	-639.4	-221.6	0.00	0.00	
3,500.0	13.69	250.88	3,419.2	-229.4	-661.8	-229.4	0.00	0.00	
3,600.0	13.69	250.88	3,516.4	-237.1	-684.1	-237.1	0.00	0.00	
3,700.0	13.69	250.88	3,613.5	-244.9	-706.5	-244.9	0.00	0.00	
3,800.0	13.69	250.88	3,710.7	-252.6	-728.9	-252.6	0.00	0.00	
3,900.0	13.69	250.88	3,807.8	-260.4	-751.2	-260.4	0.00	0.00	
4,000.0	13.69	250.88	3,905.0	-268.1	-773.6	-268.1	0.00	0.00	
4,100.0	13.69	250.88	4,002.2	-275.9	-796.0	-275.9	0.00	0.00	
4,200.0	13.69	250.88	4,099.3	-283.7	-818.3	-283.7	0.00	0.00	
4,300.0	13.69	250.88	4,196.5	-291.4	-840.7	-291.4	0.00	0.00	
4,400.0	13.69	250.88	4,293.6	-299.2	-863.0	-299.2	0.00	0.00	
4,471.4	13.69	250.88	4,363.0	-304.7	-879.0	-304.7	0.00	0.00	Sussex
4,500.0	13.69	250.88	4,390.8	-306.9	-885.4	-306.9	0.00	0.00	
4,600.0	13.69	250.88	4,487.9	-314.7	-907.8	-314.7	0.00	0.00	
4,700.0	13.69	250.88	4,585.1	-322.4	-930.1	-322.4	0.00	0.00	
4,778.1	13.69	250.88	4,661.0	-328.5	-947.6	-328.5	0.00	0.00	Sussex Marker

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4983.0ft
Project:	DJ Wattenberg	MD Reference:	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	North Reference:	True
Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	13.69	250.88	4,682.3	-330.2	-952.5	-330.2	0.00	0.00	
4,900.0	13.69	250.88	4,779.4	-337.9	-974.8	-337.9	0.00	0.00	
5,000.0	13.69	250.88	4,876.6	-345.7	-997.2	-345.7	0.00	0.00	
5,064.2	13.69	250.88	4,939.0	-350.6	-1,011.6	-350.6	0.00	0.00	Shannon
5,100.0	13.69	250.88	4,973.7	-353.4	-1,019.6	-353.4	0.00	0.00	
5,200.0	13.69	250.88	5,070.9	-361.2	-1,041.9	-361.2	0.00	0.00	
5,300.0	13.69	250.88	5,168.1	-368.9	-1,064.3	-368.9	0.00	0.00	
5,400.0	13.69	250.88	5,265.2	-376.7	-1,086.7	-376.7	0.00	0.00	
5,500.0	13.69	250.88	5,362.4	-384.4	-1,109.0	-384.4	0.00	0.00	
5,600.0	13.69	250.88	5,459.5	-392.2	-1,131.4	-392.2	0.00	0.00	
5,700.0	13.69	250.88	5,556.7	-399.9	-1,153.7	-399.9	0.00	0.00	
5,800.0	13.69	250.88	5,653.9	-407.7	-1,176.1	-407.7	0.00	0.00	
5,900.0	13.69	250.88	5,751.0	-415.4	-1,198.5	-415.4	0.00	0.00	
6,000.0	13.69	250.88	5,848.2	-423.2	-1,220.8	-423.2	0.00	0.00	
6,100.0	13.69	250.88	5,945.3	-430.9	-1,243.2	-430.9	0.00	0.00	
6,200.0	13.69	250.88	6,042.5	-438.7	-1,265.6	-438.7	0.00	0.00	
6,300.0	13.69	250.88	6,139.6	-446.4	-1,287.9	-446.4	0.00	0.00	
6,400.0	13.69	250.88	6,236.8	-454.2	-1,310.3	-454.2	0.00	0.00	
6,500.0	13.69	250.88	6,334.0	-461.9	-1,332.6	-461.9	0.00	0.00	
6,600.0	13.69	250.88	6,431.1	-469.7	-1,355.0	-469.7	0.00	0.00	
6,653.4	13.69	250.88	6,483.0	-473.8	-1,366.9	-473.8	0.00	0.00	Teepee Buttes (*if present)
6,700.0	13.69	250.88	6,528.3	-477.4	-1,377.4	-477.4	0.00	0.00	
6,800.0	13.69	250.88	6,625.4	-485.2	-1,399.7	-485.2	0.00	0.00	
6,840.6	13.69	250.88	6,664.9	-488.3	-1,408.8	-488.3	0.00	0.00	Start DLS 10.00 TFO 108.81
6,900.0	13.03	276.64	6,722.7	-489.9	-1,422.1	-489.9	10.00	-1.12	
7,000.0	17.22	312.31	6,819.4	-478.6	-1,444.3	-478.6	10.00	4.19	
7,100.0	24.89	330.51	6,912.8	-450.2	-1,465.7	-450.2	10.00	7.68	
7,200.0	33.76	340.08	6,999.9	-405.7	-1,485.5	-405.7	10.00	8.86	
7,300.0	43.07	345.97	7,078.2	-346.3	-1,503.3	-346.3	10.00	9.32	
7,384.9	51.16	349.53	7,136.0	-285.5	-1,516.4	-285.5	10.00	9.52	Sharon Springs
7,400.0	52.60	350.08	7,145.3	-273.8	-1,518.5	-273.8	10.00	9.59	
7,500.0	62.24	353.25	7,199.1	-190.5	-1,530.6	-190.5	10.00	9.64	
7,526.7	64.82	354.00	7,211.0	-166.8	-1,533.2	-166.8	10.00	9.68	Niobrara
7,600.0	71.94	355.90	7,238.0	-99.0	-1,539.2	-99.0	10.00	9.70	
7,676.9	79.42	357.74	7,257.0	-24.6	-1,543.3	-24.6	10.00	9.73	B Chalk
7,700.0	81.67	358.27	7,260.8	-1.8	-1,544.1	-1.8	10.00	9.74	
7,785.5	90.00	0.20	7,267.0	83.3	-1,545.2	83.3	10.00	9.74	Start 6480.0 hold at 7785.5 MD
7,800.0	90.00	0.20	7,267.0	97.8	-1,545.2	97.8	0.00	0.00	
7,900.0	90.00	0.20	7,267.0	197.8	-1,544.8	197.8	0.00	0.00	
8,000.0	90.00	0.20	7,267.0	297.8	-1,544.5	297.8	0.00	0.00	
8,100.0	90.00	0.20	7,267.0	397.8	-1,544.1	397.8	0.00	0.00	
8,200.0	90.00	0.20	7,267.0	497.8	-1,543.8	497.8	0.00	0.00	
8,300.0	90.00	0.20	7,267.0	597.8	-1,543.4	597.8	0.00	0.00	
8,400.0	90.00	0.20	7,267.0	697.8	-1,543.1	697.8	0.00	0.00	
8,500.0	90.00	0.20	7,267.0	797.8	-1,542.7	797.8	0.00	0.00	
8,600.0	90.00	0.20	7,267.0	897.8	-1,542.4	897.8	0.00	0.00	
8,700.0	90.00	0.20	7,267.0	997.8	-1,542.0	997.8	0.00	0.00	
8,800.0	90.00	0.20	7,267.0	1,097.8	-1,541.7	1,097.8	0.00	0.00	
8,900.0	90.00	0.20	7,267.0	1,197.8	-1,541.3	1,197.8	0.00	0.00	
9,000.0	90.00	0.20	7,267.0	1,297.8	-1,541.0	1,297.8	0.00	0.00	
9,100.0	90.00	0.20	7,267.0	1,397.8	-1,540.6	1,397.8	0.00	0.00	
9,200.0	90.00	0.20	7,267.0	1,497.8	-1,540.3	1,497.8	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4983.0ft
Project:	DJ Wattenberg	MD Reference:	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	North Reference:	True
Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,300.0	90.00	0.20	7,267.0	1,597.8	-1,539.9	1,597.8	0.00	0.00	
9,400.0	90.00	0.20	7,267.0	1,697.8	-1,539.6	1,697.8	0.00	0.00	
9,500.0	90.00	0.20	7,267.0	1,797.8	-1,539.2	1,797.8	0.00	0.00	
9,600.0	90.00	0.20	7,267.0	1,897.8	-1,538.9	1,897.8	0.00	0.00	
9,700.0	90.00	0.20	7,267.0	1,997.8	-1,538.5	1,997.8	0.00	0.00	
9,800.0	90.00	0.20	7,267.0	2,097.8	-1,538.2	2,097.8	0.00	0.00	
9,900.0	90.00	0.20	7,267.0	2,197.8	-1,537.8	2,197.8	0.00	0.00	
10,000.0	90.00	0.20	7,267.0	2,297.8	-1,537.5	2,297.8	0.00	0.00	
10,100.0	90.00	0.20	7,267.0	2,397.8	-1,537.1	2,397.8	0.00	0.00	
10,200.0	90.00	0.20	7,267.0	2,497.8	-1,536.8	2,497.8	0.00	0.00	
10,300.0	90.00	0.20	7,267.0	2,597.8	-1,536.4	2,597.8	0.00	0.00	
10,400.0	90.00	0.20	7,267.0	2,697.8	-1,536.1	2,697.8	0.00	0.00	
10,500.0	90.00	0.20	7,267.0	2,797.8	-1,535.7	2,797.8	0.00	0.00	
10,600.0	90.00	0.20	7,267.0	2,897.8	-1,535.4	2,897.8	0.00	0.00	
10,700.0	90.00	0.20	7,267.0	2,997.8	-1,535.1	2,997.8	0.00	0.00	
10,800.0	90.00	0.20	7,267.0	3,097.8	-1,534.7	3,097.8	0.00	0.00	
10,900.0	90.00	0.20	7,267.0	3,197.8	-1,534.4	3,197.8	0.00	0.00	
11,000.0	90.00	0.20	7,267.0	3,297.8	-1,534.0	3,297.8	0.00	0.00	
11,100.0	90.00	0.20	7,267.0	3,397.8	-1,533.7	3,397.8	0.00	0.00	
11,200.0	90.00	0.20	7,267.0	3,497.8	-1,533.3	3,497.8	0.00	0.00	
11,300.0	90.00	0.20	7,267.0	3,597.8	-1,533.0	3,597.8	0.00	0.00	
11,400.0	90.00	0.20	7,267.0	3,697.8	-1,532.6	3,697.8	0.00	0.00	
11,500.0	90.00	0.20	7,267.0	3,797.8	-1,532.3	3,797.8	0.00	0.00	
11,600.0	90.00	0.20	7,267.0	3,897.8	-1,531.9	3,897.8	0.00	0.00	
11,700.0	90.00	0.20	7,267.0	3,997.8	-1,531.6	3,997.8	0.00	0.00	
11,800.0	90.00	0.20	7,267.0	4,097.8	-1,531.2	4,097.8	0.00	0.00	
11,900.0	90.00	0.20	7,267.0	4,197.8	-1,530.9	4,197.8	0.00	0.00	
12,000.0	90.00	0.20	7,267.0	4,297.8	-1,530.5	4,297.8	0.00	0.00	
12,100.0	90.00	0.20	7,267.0	4,397.8	-1,530.2	4,397.8	0.00	0.00	
12,200.0	90.00	0.20	7,267.0	4,497.8	-1,529.8	4,497.8	0.00	0.00	
12,300.0	90.00	0.20	7,267.0	4,597.8	-1,529.5	4,597.8	0.00	0.00	
12,400.0	90.00	0.20	7,267.0	4,697.8	-1,529.1	4,697.8	0.00	0.00	
12,500.0	90.00	0.20	7,267.0	4,797.8	-1,528.8	4,797.8	0.00	0.00	
12,600.0	90.00	0.20	7,267.0	4,897.8	-1,528.4	4,897.8	0.00	0.00	
12,700.0	90.00	0.20	7,267.0	4,997.8	-1,528.1	4,997.8	0.00	0.00	
12,800.0	90.00	0.20	7,267.0	5,097.8	-1,527.7	5,097.8	0.00	0.00	
12,900.0	90.00	0.20	7,267.0	5,197.8	-1,527.4	5,197.8	0.00	0.00	
13,000.0	90.00	0.20	7,267.0	5,297.8	-1,527.0	5,297.8	0.00	0.00	
13,100.0	90.00	0.20	7,267.0	5,397.8	-1,526.7	5,397.8	0.00	0.00	
13,200.0	90.00	0.20	7,267.0	5,497.8	-1,526.3	5,497.8	0.00	0.00	
13,300.0	90.00	0.20	7,267.0	5,597.8	-1,526.0	5,597.8	0.00	0.00	
13,400.0	90.00	0.20	7,267.0	5,697.8	-1,525.6	5,697.8	0.00	0.00	
13,500.0	90.00	0.20	7,267.0	5,797.8	-1,525.3	5,797.8	0.00	0.00	
13,600.0	90.00	0.20	7,267.0	5,897.8	-1,524.9	5,897.8	0.00	0.00	
13,700.0	90.00	0.20	7,267.0	5,997.8	-1,524.6	5,997.8	0.00	0.00	
13,800.0	90.00	0.20	7,267.0	6,097.8	-1,524.2	6,097.8	0.00	0.00	
13,900.0	90.00	0.20	7,267.0	6,197.8	-1,523.9	6,197.8	0.00	0.00	
14,000.0	90.00	0.20	7,267.0	6,297.8	-1,523.5	6,297.8	0.00	0.00	
14,100.0	90.00	0.20	7,267.0	6,397.8	-1,523.2	6,397.8	0.00	0.00	
14,200.0	90.00	0.20	7,267.0	6,497.8	-1,522.8	6,497.8	0.00	0.00	
14,265.5	90.00	0.20	7,267.0	6,563.3	-1,522.6	6,563.3	0.00	0.00	TD at 14265.5

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4983.0ft
Project:	DJ Wattenberg	MD Reference:	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	North Reference:	True
Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Bighorn 4A-17H-P267 P	0.00	0.38	7,267.0	6,563.3	-1,522.6	1,298,652.64	3,163,929.31	40.151701	-104.913573
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
483.5	483.0	Fox Hills - BASE				
4,471.4	4,363.0	Sussex				
4,778.1	4,661.0	Sussex Marker				
5,064.2	4,939.0	Shannon				
6,653.4	6,483.0	Teepee Buttes (*if present)				
7,384.9	7,136.0	Sharon Springs				
7,526.7	7,211.0	Niobrara				
7,676.9	7,257.0	B Chalk				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
200.0	200.0	0.0	0.0	Start Build 2.00	
884.5	878.0	-26.7	-76.9	Start 5956.1 hold at 884.5 MD	
6,840.6	6,664.9	-488.3	-1,408.8	Start DLS 10.00 TFO 108.81	
7,785.5	7,267.0	83.3	-1,545.2	Start 6480.0 hold at 7785.5 MD	
14,265.5	7,267.0	6,563.3	-1,522.6	TD at 14265.5	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S17-T2N-R67W (Big Horn)

Bighorn 4A-17H-P267

DD

Plan #2

Anticollision Report

18 November, 2014

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	11/18/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	14,265.5	Plan #2 (DD)	Geolink MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S17-T2N-R67W (Big Horn)						
ALVIN-STATE 1 (EXISTING) - MERIT ENERGY - NO SU						Out of range
Bighorn 4B-17H-P267 - DD - Plan #3	200.0	200.0	9.8	9.2	16.491	CC, ES
Bighorn 4B-17H-P267 - DD - Plan #3	14,265.5	14,800.0	329.6	160.7	1.952	SF
Bighorn 4C-17H-P267 - DD - Plan #2	200.0	200.0	19.9	19.3	33.454	CC, ES
Bighorn 4C-17H-P267 - DD - Plan #2	14,265.5	14,586.8	462.9	228.1	1.972	SF
Bighorn 4D-17H-P267 - DD - Plan #1	200.0	200.0	29.9	29.3	50.416	CC, ES
Bighorn 4D-17H-P267 - DD - Plan #1	14,265.5	14,786.3	721.2	497.8	3.228	SF
Bighorn 4E-17H-P267 - DD - Plan #1	200.0	200.0	40.0	39.4	67.379	CC, ES
Bighorn 4E-17H-P267 - DD - Plan #1	14,265.5	14,535.9	910.2	675.2	3.873	SF
Bighorn 4F-17H-P267 - DD - Plan #3	200.0	200.0	49.8	49.2	83.873	CC, ES
Bighorn 4F-17H-P267 - DD - Plan #3	6,000.0	5,925.5	988.8	953.8	28.234	SF
Bighorn 4G-17H-P267 - DD - Plan #2	200.0	200.0	59.8	59.2	100.835	CC, ES
Bighorn 4G-17H-P267 - DD - Plan #2	5,200.0	5,111.4	991.3	962.2	34.064	SF
Bighorn 4H-17H-P267 - DD - Plan #2	200.0	200.0	69.9	69.3	117.797	CC, ES
Bighorn 4H-17H-P267 - DD - Plan #2	4,600.0	4,495.0	997.8	973.7	41.425	SF
Bighorn 4I-17H-P267 - DD - Plan #4	200.0	200.0	80.0	79.4	134.760	CC, ES
Bighorn 4I-17H-P267 - DD - Plan #4	2,000.0	1,951.8	416.2	407.2	46.161	SF
Bighorn 4J-17H-P267 - DD - Plan #3	200.0	200.0	90.0	89.4	151.722	CC, ES
Bighorn 4J-17H-P267 - DD - Plan #3	700.0	689.4	146.9	144.6	63.206	SF
Bighorn 4K-17H-P267 - DD - Plan #2	200.0	200.0	99.8	99.2	168.216	CC, ES
Bighorn 4K-17H-P267 - DD - Plan #2	700.0	683.1	165.4	163.1	71.475	SF
Bighorn 4L-17H-P267 - DD - Plan #3	200.0	200.0	109.9	109.3	185.179	CC, ES
Bighorn 4L-17H-P267 - DD - Plan #3	700.0	676.0	189.8	187.5	82.447	SF
DECHANT 7 (EXISTING) - FOUNDATION - NO SURVEY						Out of range
DECHANT STATE V 16-12JI (EXISTING) - KMG - NO SU						Out of range
DECHANT STATE V 16-4JI (EXISTING) - KMG - NO SU						Out of range
DECHANT STATE V 16-5JI (EXISTING) - KMG - NO SU						Out of range
DECHANT-STATE 3 (EXISTING) - FOUNDATION - NO S						Out of range
DECHANT-STATE 5 (EXISTING) - FOUNDATION - NO S						Out of range
DECHANT-STATE 9 (EXISTING) - KMG - NO SURVEYS						Out of range
DIER 1 (EXISTING) - ENCANA WELL - GYRO						Out of range
DIER 33-8 (EXISTING) - ENCANA WELL - GYRO	14,066.7	7,225.3	266.2	139.5	2.102	CC, ES, SF
DIER 34-8 (EXISTING) - ENCANA WELL - GYRO	12,459.8	7,223.8	140.9	42.2	1.428	Level 3, CC, ES, SF
DIER 44-8 (EXISTING) - ENCANA WELL - GYRO						Out of range
DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEY	14,079.0	7,202.0	318.2	191.4	2.509	CC, ES
DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEY	14,100.0	7,202.0	318.9	191.7	2.507	SF
DIER 4-8 (EXISTING) - ENCANA - GYRO						Out of range
DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER J 1-A (EXISTING) - ENCANA WELL - GYRO						Out of range
MILLER 1 (EXISTING) - SUNDANCE WELL - GYRO						Out of range
MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURV	11,058.0	7,225.0	214.9	140.4	2.884	CC, ES, SF
MILLER 13-17J (EXISTING) - DD - Plan #1						Out of range
MILLER 13-17J (EXISTING) - DD - SURVEYS						Out of range
MILLER 2-17 (EXISTING) - ENCANA WELL - GYRO						Out of range
MILLER 23-17J (EXISTING) - DD - Plan #1	8,810.0	7,700.0	865.8	819.8	18.845	CC, ES
MILLER 23-17J (EXISTING) - DD - Plan #1	9,100.0	7,725.3	912.6	862.4	18.174	SF
MILLER 23-17J (EXISTING) - DD - SURVEYS	8,778.9	7,639.6	862.5	817.5	19.150	CC
MILLER 23-17J (EXISTING) - DD - SURVEYS	8,800.0	7,641.4	862.8	817.4	19.027	ES
MILLER 23-17J (EXISTING) - DD - SURVEYS	9,000.0	7,657.2	890.2	841.9	18.418	SF
MILLER 2-4-17 (EXISTING) - DD - Plan #1						Out of range
MILLER 2-4-17 (EXISTING) - DD - SURVEYS						Out of range
MILLER 31-17C (EXISTING) - SUNDANCE WELL - GYR	11,426.1	7,229.4	518.1	437.2	6.409	CC, ES

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference	Offset	Distance		Separation	Warning
	Measured Depth (ft)	Measured Depth (ft)	Between Centres (ft)	Between Ellipses (ft)		
S17-T2N-R67W (Big Horn)						
MILLER 31-17C (EXISTING) - SUNDANCE WELL - GYR	11,500.0	7,229.6	523.3	441.2	6.374	SF
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	1,430.8	1,378.8	499.4	492.4	70.787	CC
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	1,500.0	1,446.0	499.7	492.2	66.774	ES
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	3,200.0	3,097.7	651.7	635.9	41.181	SF
MILLER 32-17 (EXISTING) SUNDANCE - SUNDANCE W						Out of range
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	3,288.9	3,185.1	150.7	132.1	8.088	CC
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	3,300.0	3,195.8	150.7	132.0	8.052	ES
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	8,816.8	7,549.9	306.3	256.3	6.129	SF
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	3,458.9	3,352.2	114.2	94.5	5.785	CC, ES
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	3,500.0	3,392.3	114.6	94.6	5.725	SF
MILLER 41-17 (EXISTING) - SUNDANCE WELL - GYRO						Out of range
MILLER 42-17 (EXISTING) - SUNDANCE WELL - NO SU						Out of range
MILLER 43-17 (EXISTING) - SUNDANCE - NO SURVEY						Out of range
MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVE						Out of range
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	3,090.5	2,998.0	109.9	92.5	6.307	CC
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	3,100.0	3,007.2	110.0	92.5	6.294	ES, SF
MILLER CJ1A-17 (EXISTING) - DD - SURVEYS						Out of range
OWENS 44-8 (EXISTING) - KPK WELL - SURVEYS						Out of range
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	3,212.2	3,116.6	160.2	142.0	8.800	CC, ES
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	3,300.0	3,201.9	161.5	142.9	8.652	SF
PACE 2 (EXISTING) - TEXAS TEA OIL - NO SURVEYS						Out of range
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	200.0	180.0	303.0	302.4	495.835	CC, ES
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	3,800.0	3,690.7	991.1	977.3	72.014	SF
SATER 21-8 (EXISTING) - KERRMCGEE WELL - SURV						Out of range
SATER 24-8 (EXISTING) - KERRMCGEE WELL - SURV						Out of range
SATER 2-8 (EXISTING) - KERRMCGEE WELL - SURVE						Out of range
SATER 28-8 (EXISTING) - KERRMCGEE WELL - SURV						Out of range
SATER 7-8 (EXISTING) - KERRMCGEE WELL - SURVE						Out of range
SATER 8-8 (EXISTING) - KERRMCGEE WELL - SURVE						Out of range
STANLEY 2 (EXISTING) - GERRITY OIL - NO SURVEYS						Out of range

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #3													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.02	0.0	9.8	9.8					
100.0	100.0	100.0	100.0	0.1	0.1	90.02	0.0	9.8	9.8	9.5	0.24	40.050		
200.0	200.0	200.0	200.0	0.3	0.3	90.02	0.0	9.8	9.8	9.2	0.59	16.491	CC, ES	
300.0	300.0	300.1	300.1	0.5	0.5	-162.48	-0.3	9.4	11.1	10.1	0.94	11.758		
400.0	399.8	400.5	400.4	0.7	0.7	-160.68	-2.3	6.6	13.2	11.9	1.30	10.178		
500.0	499.5	500.8	500.5	0.9	0.9	-156.08	-6.5	0.9	15.8	14.2	1.67	9.488		
600.0	598.7	601.2	600.3	1.2	1.1	-150.25	-12.7	-7.6	19.2	17.1	2.09	9.170		
700.0	697.5	701.6	699.7	1.5	1.4	-144.26	-21.0	-18.9	23.3	20.7	2.59	8.988		
800.0	795.6	801.9	798.5	1.9	1.7	-138.68	-31.3	-33.0	28.4	25.2	3.22	8.837		
884.5	878.0	886.7	881.5	2.2	2.1	-134.48	-41.6	-47.1	33.5	29.6	3.84	8.713		
900.0	893.1	902.2	896.6	2.3	2.1	-133.73	-43.6	-49.9	34.5	30.5	3.97	8.693		
1,000.0	990.2	1,002.0	993.8	2.7	2.5	-129.52	-56.9	-68.0	40.8	36.1	4.78	8.542		
1,100.0	1,087.4	1,101.7	1,091.0	3.2	3.0	-126.45	-70.1	-86.2	47.4	41.7	5.62	8.429		
1,200.0	1,184.5	1,201.5	1,188.2	3.6	3.4	-124.13	-83.3	-104.3	54.0	47.5	6.47	8.345		
1,300.0	1,281.7	1,301.3	1,285.4	4.1	3.8	-122.31	-96.6	-122.4	60.7	53.3	7.33	8.282		
1,400.0	1,378.9	1,401.0	1,382.6	4.5	4.2	-120.86	-109.8	-140.6	67.4	59.2	8.19	8.234		
1,500.0	1,476.0	1,500.8	1,479.8	5.0	4.7	-119.68	-123.1	-158.7	74.2	65.1	9.05	8.196		
1,600.0	1,573.2	1,600.5	1,577.0	5.4	5.1	-118.69	-136.3	-176.8	81.0	71.1	9.92	8.166		
1,700.0	1,670.3	1,700.3	1,674.2	5.9	5.5	-117.86	-149.6	-195.0	87.8	77.0	10.79	8.142		
1,800.0	1,767.5	1,800.1	1,771.4	6.3	5.9	-117.14	-162.8	-213.1	94.7	83.0	11.66	8.122		
1,900.0	1,864.7	1,899.8	1,868.6	6.8	6.4	-116.52	-176.1	-231.2	101.5	89.0	12.52	8.105		
2,000.0	1,961.8	1,999.6	1,965.8	7.2	6.8	-115.99	-189.3	-249.4	108.4	95.0	13.40	8.091		
2,100.0	2,059.0	2,099.3	2,063.0	7.7	7.2	-115.51	-202.5	-267.5	115.3	101.0	14.27	8.079		
2,200.0	2,156.1	2,199.1	2,160.2	8.1	7.7	-115.09	-215.8	-285.6	122.1	107.0	15.14	8.069		
2,300.0	2,253.3	2,298.9	2,257.4	8.6	8.1	-114.71	-229.0	-303.8	129.0	113.0	16.01	8.060		
2,400.0	2,350.4	2,398.6	2,354.6	9.1	8.5	-114.37	-242.3	-321.9	135.9	119.0	16.88	8.052		
2,500.0	2,447.6	2,498.4	2,451.8	9.5	9.0	-114.07	-255.5	-340.0	142.8	125.0	17.75	8.045		
2,600.0	2,544.8	2,598.1	2,549.0	10.0	9.4	-113.79	-268.8	-358.2	149.7	131.1	18.62	8.039		
2,700.0	2,641.9	2,697.9	2,646.2	10.4	9.8	-113.54	-282.0	-376.3	156.6	137.1	19.49	8.034		
2,800.0	2,739.1	2,797.6	2,743.4	10.9	10.3	-113.31	-295.3	-394.4	163.5	143.1	20.36	8.029		
2,900.0	2,836.2	2,897.4	2,840.6	11.3	10.7	-113.09	-308.5	-412.5	170.4	149.2	21.24	8.024		
3,000.0	2,933.4	2,997.2	2,937.8	11.8	11.1	-112.90	-321.8	-430.7	177.3	155.2	22.11	8.020		
3,100.0	3,030.6	3,096.9	3,035.0	12.3	11.6	-112.71	-335.0	-448.8	184.2	161.2	22.98	8.017		
3,200.0	3,127.7	3,196.7	3,132.2	12.7	12.0	-112.55	-348.2	-466.9	191.1	167.3	23.85	8.014		
3,300.0	3,224.9	3,296.4	3,229.4	13.2	12.4	-112.39	-361.5	-485.1	198.0	173.3	24.72	8.011		
3,400.0	3,322.0	3,396.2	3,326.6	13.6	12.9	-112.24	-374.7	-503.2	205.0	179.4	25.60	8.008		
3,500.0	3,419.2	3,496.0	3,423.8	14.1	13.3	-112.11	-388.0	-521.3	211.9	185.4	26.47	8.005		
3,600.0	3,516.4	3,595.7	3,521.0	14.5	13.7	-111.98	-401.2	-539.5	218.8	191.5	27.34	8.003		
3,700.0	3,613.5	3,695.5	3,618.2	15.0	14.2	-111.86	-414.5	-557.6	225.7	197.5	28.21	8.001		
3,800.0	3,710.7	3,795.2	3,715.4	15.5	14.6	-111.74	-427.7	-575.7	232.6	203.6	29.08	7.999		
3,900.0	3,807.8	3,895.0	3,812.6	15.9	15.0	-111.64	-441.0	-593.9	239.6	209.6	29.96	7.997		
4,000.0	3,905.0	3,994.8	3,909.8	16.4	15.5	-111.54	-454.2	-612.0	246.5	215.6	30.83	7.995		
4,100.0	4,002.2	4,094.5	4,007.0	16.8	15.9	-111.44	-467.4	-630.1	253.4	221.7	31.70	7.994		
4,200.0	4,099.3	4,194.3	4,104.2	17.3	16.3	-111.35	-480.7	-648.3	260.3	227.7	32.57	7.992		
4,300.0	4,196.5	4,294.0	4,201.4	17.7	16.8	-111.27	-493.9	-666.4	267.2	233.8	33.44	7.991		
4,400.0	4,293.6	4,393.8	4,298.6	18.2	17.2	-111.19	-507.2	-684.5	274.2	239.8	34.32	7.989		
4,500.0	4,390.8	4,493.6	4,395.8	18.7	17.6	-111.11	-520.4	-702.7	281.1	245.9	35.19	7.988		
4,600.0	4,487.9	4,593.3	4,493.0	19.1	18.1	-111.04	-533.7	-720.8	288.0	251.9	36.06	7.987		
4,700.0	4,585.1	4,693.1	4,590.2	19.6	18.5	-110.97	-546.9	-738.9	294.9	258.0	36.93	7.986		
4,800.0	4,682.3	4,792.8	4,687.4	20.0	18.9	-110.90	-560.2	-757.1	301.9	264.1	37.81	7.985		
4,900.0	4,779.4	4,892.6	4,784.6	20.5	19.4	-110.84	-573.4	-775.2	308.8	270.1	38.68	7.984		
5,000.0	4,876.6	4,992.4	4,881.8	20.9	19.8	-110.77	-586.7	-793.3	315.7	276.2	39.55	7.983		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	4,973.7	5,092.1	4,979.0	21.4	20.2	-110.72	-599.9	-811.5	322.6	282.2	40.42	7.982		
5,200.0	5,070.9	5,191.9	5,076.2	21.9	20.7	-110.66	-613.1	-829.6	329.6	288.3	41.29	7.981		
5,300.0	5,168.1	5,291.6	5,173.4	22.3	21.1	-110.61	-626.4	-847.7	336.5	294.3	42.17	7.980		
5,400.0	5,265.2	5,391.4	5,270.6	22.8	21.6	-110.56	-639.6	-865.9	343.4	300.4	43.04	7.979		
5,500.0	5,362.4	5,491.1	5,367.8	23.2	22.0	-110.51	-652.9	-884.0	350.3	306.4	43.91	7.979		
5,600.0	5,459.5	5,590.9	5,465.0	23.7	22.4	-110.46	-666.1	-902.1	357.3	312.5	44.78	7.978		
5,700.0	5,556.7	5,690.7	5,562.2	24.1	22.9	-110.41	-679.4	-920.2	364.2	318.5	45.66	7.977		
5,800.0	5,653.9	5,790.4	5,659.4	24.6	23.3	-110.37	-692.6	-938.4	371.1	324.6	46.53	7.977		
5,900.0	5,751.0	5,890.2	5,756.6	25.1	23.7	-110.33	-705.9	-956.5	378.1	330.7	47.40	7.976		
6,000.0	5,848.2	5,989.9	5,853.8	25.5	24.2	-110.29	-719.1	-974.6	385.0	336.7	48.27	7.975		
6,100.0	5,945.3	6,089.7	5,951.0	26.0	24.6	-110.25	-732.3	-992.8	391.9	342.8	49.14	7.975		
6,200.0	6,042.5	6,189.5	6,048.2	26.4	25.0	-110.21	-745.6	-1,010.9	398.8	348.8	50.02	7.974		
6,300.0	6,139.6	6,289.2	6,145.4	26.9	25.5	-110.17	-758.8	-1,029.0	405.8	354.9	50.89	7.974		
6,400.0	6,236.8	6,389.0	6,242.6	27.3	25.9	-110.14	-772.1	-1,047.2	412.7	360.9	51.76	7.973		
6,500.0	6,334.0	6,488.7	6,339.8	27.8	26.3	-110.10	-785.3	-1,065.3	419.6	367.0	52.63	7.973		
6,600.0	6,431.1	6,588.5	6,437.0	28.3	26.8	-110.07	-798.6	-1,083.4	426.6	373.1	53.51	7.972		
6,700.0	6,528.3	6,688.3	6,534.2	28.7	27.2	-110.04	-811.8	-1,101.6	433.5	379.1	54.38	7.972		
6,800.0	6,625.4	6,788.0	6,631.4	29.2	27.6	-110.01	-825.1	-1,119.7	440.4	385.2	55.25	7.971		
6,840.6	6,664.9	6,828.5	6,670.8	29.4	27.8	-109.99	-830.4	-1,127.1	443.2	387.6	55.60	7.971		
6,850.0	6,674.0	6,837.9	6,680.0	29.4	27.9	-113.76	-831.7	-1,128.8	443.9	388.3	55.65	7.977		
6,900.0	6,722.7	6,887.5	6,728.3	29.6	28.1	-135.23	-838.3	-1,137.8	449.7	394.0	55.69	8.075		
6,950.0	6,771.3	6,936.4	6,776.0	29.8	28.3	-154.99	-844.8	-1,146.7	458.9	403.5	55.43	8.279		
7,000.0	6,819.4	6,984.3	6,822.6	29.9	28.5	-169.68	-851.1	-1,155.4	471.5	416.6	54.86	8.594		
7,050.0	6,866.7	7,048.4	6,885.2	30.1	28.8	-179.24	-859.1	-1,167.0	487.3	433.2	54.09	9.009		
7,100.0	6,912.8	7,209.0	7,042.3	30.2	29.1	175.67	-850.8	-1,196.4	499.7	446.5	53.21	9.391		
7,150.0	6,957.3	7,384.7	7,204.2	30.3	29.1	170.83	-791.5	-1,226.6	503.8	452.4	51.44	9.794		
7,200.0	6,999.9	7,557.3	7,338.8	30.3	28.7	165.38	-687.5	-1,251.7	499.0	450.1	48.81	10.222		
7,250.0	7,040.4	7,710.4	7,428.1	30.4	28.2	159.31	-564.9	-1,268.3	486.4	440.9	45.49	10.693		
7,300.0	7,078.2	7,838.2	7,476.0	30.4	27.7	153.03	-447.0	-1,277.3	468.5	426.7	41.80	11.207		
7,350.0	7,113.3	7,943.0	7,495.3	30.5	27.4	146.94	-344.2	-1,280.9	447.3	409.2	38.13	11.732		
7,400.0	7,145.3	8,013.6	7,498.0	30.5	27.3	142.54	-273.6	-1,281.4	425.0	389.9	35.10	12.108		
7,450.0	7,174.0	8,054.1	7,498.0	30.5	27.2	140.43	-233.2	-1,281.4	405.3	372.5	32.79	12.360		
7,500.0	7,199.1	8,096.9	7,498.0	30.6	27.1	138.34	-190.3	-1,281.4	389.1	358.4	30.68	12.684		
7,550.0	7,220.5	8,141.9	7,498.0	30.6	27.1	136.33	-145.4	-1,281.5	376.1	347.2	28.86	13.033		
7,600.0	7,238.0	8,188.5	7,498.0	30.6	27.1	134.53	-98.8	-1,281.5	366.1	338.6	27.46	13.331		
7,650.0	7,251.5	8,236.6	7,498.0	30.7	27.1	133.04	-50.7	-1,281.6	358.7	332.3	26.46	13.555		
7,700.0	7,260.8	8,285.6	7,498.0	30.7	27.1	131.95	-1.6	-1,281.6	353.8	327.7	26.06	13.575		
7,750.0	7,265.9	8,335.3	7,498.0	30.8	27.2	131.34	48.1	-1,281.6	351.1	325.0	26.07	13.468		
7,785.5	7,267.0	8,370.8	7,498.0	30.9	27.2	131.23	83.6	-1,281.7	350.5	324.2	26.31	13.319		
7,800.0	7,267.0	8,385.3	7,498.0	30.9	27.3	131.24	98.0	-1,281.7	350.4	324.0	26.40	13.272		
7,900.0	7,267.0	8,485.3	7,498.0	31.1	27.5	131.29	198.0	-1,281.7	350.1	322.9	27.20	12.871		
8,000.0	7,267.0	8,585.3	7,498.0	31.4	27.9	131.33	298.0	-1,281.8	349.8	321.6	28.22	12.393		
8,100.0	7,267.0	8,685.3	7,498.0	31.8	28.4	131.38	398.0	-1,281.9	349.5	320.0	29.45	11.866		
8,200.0	7,267.0	8,785.3	7,498.0	32.3	28.9	131.42	498.0	-1,282.0	349.1	318.3	30.85	11.317		
8,300.0	7,267.0	8,885.3	7,498.0	32.9	29.6	131.47	598.0	-1,282.1	348.8	316.4	32.40	10.765		
8,400.0	7,267.0	8,985.3	7,498.0	33.6	30.4	131.52	698.0	-1,282.1	348.5	314.4	34.09	10.224		
8,500.0	7,267.0	9,085.3	7,498.0	34.3	31.2	131.56	798.0	-1,282.2	348.2	312.3	35.88	9.703		
8,600.0	7,267.0	9,185.3	7,498.0	35.1	32.1	131.61	898.0	-1,282.3	347.9	310.1	37.77	9.209		
8,700.0	7,267.0	9,285.3	7,498.0	36.0	33.1	131.66	998.0	-1,282.4	347.5	307.8	39.74	8.745		
8,800.0	7,267.0	9,385.3	7,498.0	36.9	34.1	131.70	1,098.0	-1,282.5	347.2	305.4	41.78	8.310		
8,900.0	7,267.0	9,485.3	7,498.0	37.9	35.2	131.75	1,198.0	-1,282.5	346.9	303.0	43.88	7.906		
9,000.0	7,267.0	9,585.3	7,498.0	39.0	36.4	131.80	1,298.0	-1,282.6	346.6	300.6	46.02	7.530		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				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)				
9,100.0	7,267.0	9,685.3	7,498.0	40.1	37.6	131.85	1,398.0	-1,282.7	346.3	298.0	48.21	7.182		
9,200.0	7,267.0	9,785.3	7,498.0	41.3	38.8	131.89	1,498.0	-1,282.8	345.9	295.5	50.44	6.859		
9,300.0	7,267.0	9,885.3	7,498.0	42.5	40.1	131.94	1,598.0	-1,282.9	345.6	292.9	52.69	6.559		
9,400.0	7,267.0	9,985.3	7,498.0	43.7	41.4	131.99	1,698.0	-1,282.9	345.3	290.3	54.97	6.281		
9,500.0	7,267.0	10,085.3	7,498.0	45.0	42.8	132.04	1,798.0	-1,283.0	345.0	287.7	57.28	6.023		
9,600.0	7,267.0	10,185.3	7,498.0	46.3	44.2	132.08	1,898.0	-1,283.1	344.7	285.1	59.60	5.783		
9,700.0	7,267.0	10,285.3	7,498.0	47.6	45.6	132.13	1,998.0	-1,283.2	344.4	282.4	61.95	5.559		
9,800.0	7,267.0	10,385.3	7,498.0	48.9	47.0	132.18	2,098.0	-1,283.2	344.0	279.7	64.30	5.350		
9,900.0	7,267.0	10,485.3	7,498.0	50.3	48.4	132.23	2,198.0	-1,283.3	343.7	277.0	66.67	5.155		
10,000.0	7,267.0	10,585.3	7,498.0	51.7	49.9	132.27	2,298.0	-1,283.4	343.4	274.3	69.05	4.973		
10,100.0	7,267.0	10,685.3	7,498.0	53.2	51.4	132.32	2,398.0	-1,283.5	343.1	271.6	71.44	4.802		
10,200.0	7,267.0	10,785.3	7,498.0	54.6	52.9	132.37	2,498.0	-1,283.6	342.8	268.9	73.84	4.642		
10,300.0	7,267.0	10,885.3	7,498.0	56.1	54.4	132.42	2,598.0	-1,283.6	342.5	266.2	76.24	4.492		
10,400.0	7,267.0	10,985.3	7,498.0	57.6	56.0	132.47	2,698.0	-1,283.7	342.1	263.5	78.65	4.350		
10,500.0	7,267.0	11,085.3	7,498.0	59.0	57.5	132.52	2,798.0	-1,283.8	341.8	260.8	81.07	4.216		
10,600.0	7,267.0	11,185.3	7,498.0	60.6	59.1	132.56	2,898.0	-1,283.9	341.5	258.0	83.49	4.091		
10,700.0	7,267.0	11,285.3	7,498.0	62.1	60.6	132.61	2,998.0	-1,284.0	341.2	255.3	85.91	3.972		
10,800.0	7,267.0	11,385.3	7,498.0	63.6	62.2	132.66	3,098.0	-1,284.0	340.9	252.5	88.33	3.859		
10,900.0	7,267.0	11,485.3	7,498.0	65.2	63.8	132.71	3,198.0	-1,284.1	340.6	249.8	90.76	3.752		
11,000.0	7,267.0	11,585.3	7,498.0	66.7	65.4	132.76	3,298.0	-1,284.2	340.2	247.1	93.19	3.651		
11,100.0	7,267.0	11,685.3	7,498.0	68.3	67.0	132.81	3,398.0	-1,284.3	339.9	244.3	95.62	3.555		
11,200.0	7,267.0	11,785.3	7,498.0	69.9	68.6	132.86	3,498.0	-1,284.3	339.6	241.6	98.05	3.464		
11,300.0	7,267.0	11,885.3	7,498.0	71.4	70.2	132.91	3,598.0	-1,284.4	339.3	238.8	100.48	3.377		
11,400.0	7,267.0	11,985.3	7,498.0	73.0	71.9	132.96	3,698.0	-1,284.5	339.0	236.1	102.91	3.294		
11,500.0	7,267.0	12,085.3	7,498.0	74.6	73.5	133.01	3,798.0	-1,284.6	338.7	233.3	105.34	3.215		
11,600.0	7,267.0	12,185.3	7,498.0	76.2	75.1	133.05	3,898.0	-1,284.7	338.4	230.6	107.77	3.140		
11,700.0	7,267.0	12,285.3	7,498.0	77.9	76.8	133.10	3,998.0	-1,284.7	338.1	227.9	110.20	3.068		
11,800.0	7,267.0	12,385.3	7,498.0	79.5	78.4	133.15	4,098.0	-1,284.8	337.7	225.1	112.63	2.999		
11,900.0	7,267.0	12,485.3	7,498.0	81.1	80.1	133.20	4,198.0	-1,284.9	337.4	222.4	115.06	2.933		
12,000.0	7,267.0	12,585.3	7,498.0	82.7	81.7	133.25	4,298.0	-1,285.0	337.1	219.6	117.48	2.870		
12,100.0	7,267.0	12,685.3	7,498.0	84.4	83.4	133.30	4,398.0	-1,285.1	336.8	216.9	119.90	2.809		
12,200.0	7,267.0	12,785.3	7,498.0	86.0	85.0	133.35	4,498.0	-1,285.1	336.5	214.2	122.33	2.751		
12,300.0	7,267.0	12,885.3	7,498.0	87.6	86.7	133.40	4,598.0	-1,285.2	336.2	211.4	124.74	2.695		
12,400.0	7,267.0	12,989.3	7,498.0	89.3	88.5	133.56	4,702.1	-1,286.2	335.2	208.2	127.01	2.640		
12,500.0	7,267.0	13,089.3	7,498.0	90.9	90.1	133.81	4,802.0	-1,287.9	333.7	204.7	129.04	2.586		
12,600.0	7,267.0	13,189.3	7,498.0	92.6	91.8	134.06	4,902.0	-1,289.7	332.2	201.2	131.04	2.535		
12,700.0	7,267.0	13,289.3	7,498.0	94.3	93.5	134.31	5,001.9	-1,291.4	330.7	197.7	133.02	2.486		
12,800.0	7,267.0	13,389.3	7,498.0	95.9	95.2	134.57	5,101.9	-1,293.2	329.2	194.3	134.97	2.439		
12,900.0	7,267.0	13,489.2	7,498.0	97.6	96.9	134.82	5,201.9	-1,294.9	327.7	190.8	136.89	2.394		
13,000.0	7,267.0	13,589.2	7,498.0	99.3	98.6	135.08	5,301.8	-1,296.7	326.3	187.5	138.79	2.351		
13,100.0	7,267.0	13,689.2	7,498.0	100.9	100.3	135.34	5,401.8	-1,298.4	324.8	184.1	140.65	2.309		
13,200.0	7,267.0	13,789.2	7,498.0	102.6	102.0	135.61	5,501.8	-1,300.2	323.3	180.8	142.49	2.269		
13,300.0	7,267.0	13,889.1	7,498.0	104.3	103.7	135.87	5,601.7	-1,301.9	321.8	177.5	144.30	2.230		
13,400.0	7,267.0	13,989.1	7,498.0	106.0	105.4	136.14	5,701.7	-1,303.7	320.4	174.3	146.08	2.193		
13,500.0	7,267.0	14,089.1	7,498.0	107.6	107.1	136.41	5,801.6	-1,305.4	318.9	171.1	147.83	2.157		
13,600.0	7,267.0	14,189.1	7,498.0	109.3	108.8	136.69	5,901.6	-1,307.1	317.5	168.0	149.55	2.123		
13,700.0	7,267.0	14,289.1	7,498.0	111.0	110.5	136.96	6,001.6	-1,308.9	316.1	164.8	151.23	2.090		
13,800.0	7,267.0	14,389.0	7,498.0	112.7	112.2	137.24	6,101.5	-1,310.6	314.6	161.8	152.89	2.058		
13,900.0	7,267.0	14,489.0	7,498.0	114.4	113.9	137.52	6,201.5	-1,312.4	313.2	158.7	154.50	2.027		
14,000.0	7,267.0	14,587.9	7,498.0	116.1	115.6	137.80	6,300.3	-1,314.1	311.8	155.7	156.09	1.998		
14,020.2	7,267.0	14,604.5	7,498.0	116.4	115.9	137.82	6,316.9	-1,314.1	311.7	155.3	156.48	1.992		
14,100.0	7,267.0	14,669.9	7,498.0	117.8	117.0	137.50	6,382.4	-1,311.6	313.6	154.6	159.05	1.972		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design												S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #3		Offset Site Error:		0.0 ft	
Survey Program: 0-Geolink MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation	Warning				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)		(ft)	Axis	Factor					
14,200.0	7,267.0	14,750.0	7,498.0	119.5	118.3	136.33	6,461.9	-1,302.5	321.3	156.9	164.40	1.954					
14,265.5	7,267.0	14,800.0	7,498.0	120.6	119.1	135.20	6,511.0	-1,293.4	329.6	160.7	168.88	1.952 SF					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	19.9	19.9					
100.0	100.0	100.0	100.0	0.1	0.1	90.04	0.0	19.9	19.9	19.6	0.24	81.245		
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	19.9	19.9	19.3	0.59	33.454 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-162.36	0.0	19.9	21.5	20.6	0.94	22.820		
400.0	399.8	400.6	400.5	0.7	0.6	-163.51	-1.1	18.5	25.1	23.8	1.29	19.406		
500.0	499.5	501.2	501.1	0.9	0.8	-162.18	-4.5	14.4	29.3	27.6	1.65	17.684		
600.0	598.7	602.0	601.4	1.2	1.1	-159.32	-10.1	7.5	34.0	32.0	2.04	16.680		
700.0	697.5	702.7	701.4	1.5	1.3	-155.63	-17.9	-2.0	39.5	37.0	2.47	15.976		
800.0	795.6	803.5	800.9	1.9	1.6	-151.59	-28.0	-14.3	45.8	42.8	2.98	15.356		
884.5	878.0	888.7	884.6	2.2	1.9	-148.12	-38.2	-26.8	51.8	48.3	3.49	14.829		
900.0	893.1	904.3	899.9	2.3	2.0	-147.48	-40.2	-29.3	53.0	49.4	3.60	14.729		
1,000.0	990.2	1,004.3	997.5	2.7	2.4	-143.05	-54.0	-46.2	59.9	55.6	4.32	13.875		
1,100.0	1,087.4	1,104.0	1,094.7	3.2	2.8	-139.44	-67.9	-63.1	67.0	61.9	5.08	13.180		
1,200.0	1,184.5	1,203.7	1,191.9	3.6	3.2	-136.54	-81.8	-80.1	74.4	68.5	5.88	12.641		
1,300.0	1,281.7	1,303.3	1,289.1	4.1	3.6	-134.16	-95.6	-97.1	81.9	75.2	6.70	12.221		
1,400.0	1,378.9	1,403.0	1,386.4	4.5	4.0	-132.18	-109.5	-114.0	89.5	81.9	7.53	11.888		
1,500.0	1,476.0	1,502.7	1,483.6	5.0	4.4	-130.52	-123.3	-131.0	97.2	88.8	8.36	11.621		
1,600.0	1,573.2	1,602.3	1,580.8	5.4	4.9	-129.10	-137.2	-147.9	104.9	95.7	9.20	11.403		
1,700.0	1,670.3	1,702.0	1,678.1	5.9	5.3	-127.88	-151.1	-164.9	112.8	102.7	10.05	11.224		
1,800.0	1,767.5	1,801.7	1,775.3	6.3	5.7	-126.81	-164.9	-181.8	120.6	109.7	10.89	11.073		
1,900.0	1,864.7	1,901.3	1,872.5	6.8	6.1	-125.88	-178.8	-198.8	128.5	116.8	11.74	10.946		
2,000.0	1,961.8	2,001.0	1,969.8	7.2	6.5	-125.05	-192.7	-215.7	136.5	123.9	12.59	10.837		
2,100.0	2,059.0	2,100.7	2,067.0	7.7	7.0	-124.32	-206.5	-232.7	144.4	131.0	13.45	10.743		
2,200.0	2,156.1	2,200.3	2,164.2	8.1	7.4	-123.66	-220.4	-249.6	152.4	138.1	14.30	10.661		
2,300.0	2,253.3	2,300.0	2,261.5	8.6	7.8	-123.07	-234.2	-266.6	160.4	145.3	15.15	10.590		
2,400.0	2,350.4	2,399.7	2,358.7	9.1	8.2	-122.53	-248.1	-283.5	168.5	152.4	16.00	10.526		
2,500.0	2,447.6	2,499.3	2,455.9	9.5	8.7	-122.05	-262.0	-300.5	176.5	159.6	16.86	10.470		
2,600.0	2,544.8	2,599.0	2,553.1	10.0	9.1	-121.60	-275.8	-317.4	184.5	166.8	17.71	10.419		
2,700.0	2,641.9	2,698.7	2,650.4	10.4	9.5	-121.19	-289.7	-334.4	192.6	174.0	18.56	10.374		
2,800.0	2,739.1	2,798.3	2,747.6	10.9	9.9	-120.82	-303.5	-351.3	200.6	181.2	19.42	10.333		
2,900.0	2,836.2	2,898.0	2,844.8	11.3	10.3	-120.47	-317.4	-368.3	208.7	188.4	20.27	10.296		
3,000.0	2,933.4	2,997.7	2,942.1	11.8	10.8	-120.15	-331.3	-385.2	216.8	195.7	21.12	10.262		
3,100.0	3,030.6	3,097.3	3,039.3	12.3	11.2	-119.86	-345.1	-402.2	224.9	202.9	21.98	10.231		
3,200.0	3,127.7	3,197.0	3,136.5	12.7	11.6	-119.58	-359.0	-419.1	233.0	210.1	22.83	10.203		
3,300.0	3,224.9	3,296.7	3,233.8	13.2	12.0	-119.32	-372.9	-436.1	241.0	217.4	23.69	10.176		
3,400.0	3,322.0	3,396.3	3,331.0	13.6	12.5	-119.08	-386.7	-453.0	249.1	224.6	24.54	10.152		
3,500.0	3,419.2	3,496.0	3,428.2	14.1	12.9	-118.85	-400.6	-470.0	257.2	231.9	25.39	10.130		
3,600.0	3,516.4	3,595.7	3,525.5	14.5	13.3	-118.64	-414.4	-486.9	265.4	239.1	26.25	10.109		
3,700.0	3,613.5	3,695.3	3,622.7	15.0	13.7	-118.44	-428.3	-503.9	273.5	246.4	27.10	10.090		
3,800.0	3,710.7	3,795.0	3,719.9	15.5	14.2	-118.25	-442.2	-520.8	281.6	253.6	27.96	10.072		
3,900.0	3,807.8	3,894.7	3,817.2	15.9	14.6	-118.08	-456.0	-537.8	289.7	260.9	28.81	10.055		
4,000.0	3,905.0	3,994.3	3,914.4	16.4	15.0	-117.91	-469.9	-554.7	297.8	268.1	29.66	10.039		
4,100.0	4,002.2	4,094.0	4,011.6	16.8	15.4	-117.75	-483.8	-571.7	305.9	275.4	30.52	10.024		
4,200.0	4,099.3	4,193.7	4,108.8	17.3	15.9	-117.60	-497.6	-588.6	314.0	282.7	31.37	10.011		
4,300.0	4,196.5	4,293.3	4,206.1	17.7	16.3	-117.46	-511.5	-605.6	322.2	289.9	32.23	9.997		
4,400.0	4,293.6	4,393.0	4,303.3	18.2	16.7	-117.32	-525.3	-622.5	330.3	297.2	33.08	9.985		
4,500.0	4,390.8	4,492.7	4,400.5	18.7	17.1	-117.19	-539.2	-639.5	338.4	304.5	33.93	9.973		
4,600.0	4,487.9	4,592.3	4,497.8	19.1	17.6	-117.07	-553.1	-656.4	346.6	311.8	34.79	9.962		
4,700.0	4,585.1	4,692.0	4,595.0	19.6	18.0	-116.95	-566.9	-673.4	354.7	319.0	35.64	9.952		
4,800.0	4,682.3	4,791.7	4,692.2	20.0	18.4	-116.84	-580.8	-690.3	362.8	326.3	36.49	9.942		
4,900.0	4,779.4	4,891.3	4,789.5	20.5	18.8	-116.73	-594.7	-707.3	370.9	333.6	37.35	9.932		
5,000.0	4,876.6	4,991.0	4,886.7	20.9	19.3	-116.63	-608.5	-724.3	379.1	340.9	38.20	9.923		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	4,973.7	5,090.7	4,983.9	21.4	19.7	-116.53	-622.4	-741.2	387.2	348.2	39.06	9.915		
5,200.0	5,070.9	5,190.3	5,081.2	21.9	20.1	-116.43	-636.2	-758.2	395.4	355.4	39.91	9.907		
5,300.0	5,168.1	5,290.0	5,178.4	22.3	20.5	-116.34	-650.1	-775.1	403.5	362.7	40.76	9.899		
5,400.0	5,265.2	5,389.7	5,275.6	22.8	20.9	-116.25	-664.0	-792.1	411.6	370.0	41.62	9.891		
5,500.0	5,362.4	5,489.3	5,372.8	23.2	21.4	-116.17	-677.8	-809.0	419.8	377.3	42.47	9.884		
5,600.0	5,459.5	5,589.0	5,470.1	23.7	21.8	-116.09	-691.7	-826.0	427.9	384.6	43.32	9.877		
5,700.0	5,556.7	5,688.7	5,567.3	24.1	22.2	-116.01	-705.6	-842.9	436.1	391.9	44.18	9.871		
5,800.0	5,653.9	5,788.3	5,664.5	24.6	22.6	-115.94	-719.4	-859.9	444.2	399.2	45.03	9.864		
5,900.0	5,751.0	5,888.0	5,761.8	25.1	23.1	-115.87	-733.3	-876.8	452.3	406.5	45.88	9.858		
6,000.0	5,848.2	5,987.7	5,859.0	25.5	23.5	-115.80	-747.1	-893.8	460.5	413.7	46.74	9.853		
6,100.0	5,945.3	6,087.3	5,956.2	26.0	23.9	-115.73	-761.0	-910.7	468.6	421.0	47.59	9.847		
6,200.0	6,042.5	6,187.0	6,053.5	26.4	24.3	-115.66	-774.9	-927.7	476.8	428.3	48.44	9.842		
6,300.0	6,139.6	6,286.6	6,150.7	26.9	24.8	-115.60	-788.7	-944.6	484.9	435.6	49.30	9.837		
6,400.0	6,236.8	6,386.3	6,247.9	27.3	25.2	-115.54	-802.6	-961.6	493.1	442.9	50.15	9.832		
6,500.0	6,334.0	6,486.0	6,345.2	27.8	25.6	-115.48	-816.5	-978.5	501.2	450.2	51.00	9.827		
6,600.0	6,431.1	6,585.6	6,442.4	28.3	26.0	-115.43	-830.3	-995.5	509.4	457.5	51.86	9.822		
6,700.0	6,528.3	6,685.3	6,539.6	28.7	26.5	-115.37	-844.2	-1,012.4	517.5	464.8	52.71	9.818		
6,800.0	6,625.4	6,808.7	6,660.2	29.2	27.0	-115.39	-860.2	-1,033.5	525.4	471.8	53.62	9.798		
6,840.6	6,664.9	6,927.0	6,776.4	29.4	27.2	-116.81	-857.1	-1,053.9	523.8	470.2	53.69	9.756		
6,850.0	6,674.0	6,953.4	6,802.0	29.4	27.3	-121.02	-853.1	-1,058.4	522.7	469.1	53.60	9.751		
6,900.0	6,722.7	7,085.0	6,925.9	29.6	27.2	-145.50	-815.5	-1,080.5	513.9	461.4	52.47	9.793		
6,950.0	6,771.3	7,200.1	7,024.9	29.8	27.0	-169.00	-759.9	-1,098.4	501.2	450.8	50.48	9.929		
7,000.0	6,819.4	7,299.0	7,099.7	29.9	26.7	172.25	-696.8	-1,112.0	486.4	438.5	47.89	10.155		
7,050.0	6,866.7	7,384.1	7,154.7	30.1	26.4	158.16	-632.7	-1,122.3	470.5	425.5	44.97	10.462		
7,100.0	6,912.8	7,458.1	7,194.4	30.2	26.1	147.37	-570.9	-1,129.8	454.6	412.7	41.94	10.840		
7,150.0	6,957.3	7,523.4	7,222.7	30.3	25.9	138.75	-512.3	-1,135.3	439.6	400.6	38.96	11.281		
7,200.0	6,999.9	7,581.9	7,242.3	30.3	25.7	131.57	-457.3	-1,139.2	425.9	389.7	36.17	11.775		
7,250.0	7,040.4	7,635.2	7,255.3	30.4	25.5	125.34	-405.8	-1,141.9	414.1	380.4	33.66	12.303		
7,300.0	7,078.2	7,684.3	7,263.1	30.4	25.3	119.74	-357.3	-1,143.7	404.5	373.0	31.52	12.835		
7,350.0	7,113.3	7,730.1	7,266.6	30.5	25.2	114.58	-311.7	-1,144.7	397.3	367.5	29.80	13.331		
7,400.0	7,145.3	7,771.2	7,267.0	30.5	25.1	109.96	-270.6	-1,145.1	392.7	364.1	28.59	13.733		
7,450.0	7,174.0	7,811.7	7,267.0	30.5	25.0	105.74	-230.1	-1,145.5	390.7	362.9	27.81	14.050		
7,475.2	7,187.1	7,833.1	7,267.0	30.6	25.0	103.69	-208.7	-1,145.7	390.5	362.9	27.55	14.171		
7,500.0	7,199.1	7,854.6	7,267.0	30.6	25.0	101.76	-187.2	-1,145.9	390.7	363.3	27.37	14.275		
7,550.0	7,220.5	7,899.6	7,267.0	30.6	25.0	98.18	-142.2	-1,146.3	391.8	364.7	27.15	14.432		
7,600.0	7,238.0	7,946.3	7,267.0	30.6	24.9	95.14	-95.5	-1,146.7	393.6	366.4	27.18	14.481		
7,650.0	7,251.5	7,994.4	7,267.0	30.7	25.0	92.74	-47.5	-1,147.1	395.3	368.1	27.25	14.507		
7,700.0	7,260.8	8,043.4	7,267.0	30.7	25.0	91.07	1.6	-1,147.5	396.6	369.2	27.43	14.459		
7,750.0	7,265.9	8,093.2	7,267.0	30.8	25.1	90.16	51.3	-1,148.0	397.2	369.5	27.64	14.370		
7,785.5	7,267.0	8,128.6	7,267.0	30.9	25.1	90.00	86.8	-1,148.3	397.0	369.1	27.85	14.256		
7,800.0	7,267.0	8,143.1	7,267.0	30.9	25.2	90.00	101.3	-1,148.4	396.8	368.8	27.97	14.187		
7,900.0	7,267.0	8,243.1	7,267.0	31.1	25.5	90.00	201.3	-1,149.3	395.6	366.6	29.02	13.631		
8,000.0	7,267.0	8,343.1	7,267.0	31.4	25.9	90.00	301.3	-1,150.1	394.4	363.9	30.44	12.955		
8,100.0	7,267.0	8,443.1	7,267.0	31.8	26.4	90.00	401.3	-1,151.0	393.1	360.9	32.18	12.216		
8,200.0	7,267.0	8,543.1	7,267.0	32.3	27.0	90.00	501.3	-1,151.9	391.9	357.7	34.19	11.461		
8,300.0	7,267.0	8,643.1	7,267.0	32.9	27.8	90.00	601.2	-1,152.8	390.7	354.3	36.44	10.723		
8,400.0	7,267.0	8,743.1	7,267.0	33.6	28.6	90.00	701.2	-1,153.6	389.5	350.6	38.86	10.021		
8,500.0	7,267.0	8,843.1	7,267.0	34.3	29.5	90.00	801.2	-1,154.5	388.2	346.8	41.45	9.367		
8,600.0	7,267.0	8,943.1	7,267.0	35.1	30.5	90.00	901.2	-1,155.4	387.0	342.9	44.16	8.764		
8,700.0	7,267.0	9,043.1	7,267.0	36.0	31.5	90.00	1,001.2	-1,156.2	385.8	338.8	46.98	8.212		
8,800.0	7,267.0	9,143.1	7,267.0	36.9	32.6	90.00	1,101.2	-1,157.1	384.6	334.7	49.88	7.710		
8,900.0	7,267.0	9,243.0	7,267.0	37.9	33.8	90.00	1,201.2	-1,158.0	383.4	330.5	52.86	7.252		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
9,000.0	7,267.0	9,343.0	7,267.0	39.0	35.0	90.00	1,301.2	-1,158.9	382.1	326.2	55.90	6.836		
9,100.0	7,267.0	9,443.0	7,267.0	40.1	36.3	90.00	1,401.2	-1,159.7	380.9	321.9	58.99	6.457		
9,200.0	7,267.0	9,543.0	7,267.0	41.3	37.6	90.00	1,501.1	-1,160.6	379.7	317.6	62.13	6.111		
9,300.0	7,267.0	9,643.0	7,267.0	42.5	38.9	90.00	1,601.1	-1,161.5	378.5	313.2	65.30	5.796		
9,400.0	7,267.0	9,743.0	7,267.0	43.7	40.3	90.00	1,701.1	-1,162.4	377.2	308.7	68.51	5.507		
9,500.0	7,267.0	9,843.0	7,267.0	45.0	41.7	90.00	1,801.1	-1,163.2	376.0	304.3	71.74	5.241		
9,600.0	7,267.0	9,943.0	7,267.0	46.3	43.1	90.00	1,901.1	-1,164.1	374.8	299.8	75.00	4.997		
9,700.0	7,267.0	10,043.0	7,267.0	47.6	44.5	90.00	2,001.1	-1,165.0	373.6	295.3	78.28	4.772		
9,800.0	7,267.0	10,143.0	7,267.0	48.9	46.0	90.00	2,101.1	-1,165.8	372.4	290.8	81.58	4.564		
9,900.0	7,267.0	10,243.0	7,267.0	50.3	47.5	90.00	2,201.1	-1,166.7	371.1	286.2	84.90	4.372		
10,000.0	7,267.0	10,343.0	7,267.0	51.7	49.0	90.00	2,301.1	-1,167.6	369.9	281.7	88.23	4.193		
10,100.0	7,267.0	10,443.0	7,267.0	53.2	50.5	90.00	2,401.0	-1,168.5	368.7	277.1	91.57	4.026		
10,200.0	7,267.0	10,542.9	7,267.0	54.6	52.0	90.00	2,501.0	-1,169.3	367.5	272.5	94.93	3.871		
10,300.0	7,267.0	10,642.9	7,267.0	56.1	53.6	90.00	2,601.0	-1,170.2	366.3	268.0	98.30	3.726		
10,400.0	7,267.0	10,742.9	7,267.0	57.6	55.2	90.00	2,701.0	-1,171.1	365.0	263.4	101.67	3.590		
10,500.0	7,267.0	10,842.9	7,267.0	59.0	56.7	90.00	2,801.0	-1,172.0	363.8	258.7	105.06	3.463		
10,600.0	7,267.0	10,942.9	7,267.0	60.6	58.3	90.00	2,901.0	-1,172.8	362.6	254.1	108.45	3.343		
10,700.0	7,267.0	11,042.9	7,267.0	62.1	59.9	90.00	3,001.0	-1,173.7	361.4	249.5	111.85	3.231		
10,800.0	7,267.0	11,142.9	7,267.0	63.6	61.5	90.00	3,101.0	-1,174.6	360.1	244.9	115.26	3.125		
10,900.0	7,267.0	11,242.9	7,267.0	65.2	63.1	90.00	3,201.0	-1,175.4	358.9	240.2	118.67	3.025		
11,000.0	7,267.0	11,342.9	7,267.0	66.7	64.7	90.00	3,300.9	-1,176.3	357.7	235.6	122.09	2.930		
11,100.0	7,267.0	11,442.9	7,267.0	68.3	66.4	90.00	3,400.9	-1,177.2	356.5	231.0	125.51	2.840		
11,200.0	7,267.0	11,542.9	7,267.0	69.9	68.0	90.00	3,500.9	-1,178.1	355.3	226.3	128.94	2.755		
11,300.0	7,267.0	11,642.9	7,267.0	71.4	69.6	90.00	3,600.9	-1,178.9	354.0	221.7	132.37	2.675		
11,400.0	7,267.0	11,742.9	7,267.0	73.0	71.3	90.00	3,700.9	-1,179.8	352.8	217.0	135.80	2.598		
11,500.0	7,267.0	11,839.3	7,267.0	74.6	72.9	90.00	3,797.4	-1,180.4	351.9	212.7	139.18	2.528		
11,513.4	7,267.0	11,852.0	7,267.0	74.9	73.1	90.00	3,810.0	-1,180.3	351.9	212.2	139.63	2.520		
11,600.0	7,267.0	11,933.5	7,267.0	76.2	74.4	90.00	3,891.6	-1,179.5	352.5	210.0	142.53	2.473		
11,700.0	7,267.0	12,027.7	7,267.0	77.9	75.9	90.00	3,985.7	-1,177.0	354.7	208.9	145.87	2.432		
11,800.0	7,267.0	12,123.5	7,267.0	79.5	77.5	90.00	4,081.4	-1,173.0	358.6	209.3	149.24	2.403		
11,900.0	7,267.0	12,223.4	7,267.0	81.1	79.1	90.00	4,181.2	-1,168.5	362.8	210.1	152.69	2.376		
12,000.0	7,267.0	12,323.3	7,267.0	82.7	80.8	90.00	4,281.0	-1,163.9	367.0	210.9	156.14	2.351		
12,100.0	7,267.0	12,423.2	7,267.0	84.4	82.4	90.00	4,380.8	-1,159.3	371.3	211.7	159.59	2.326		
12,200.0	7,267.0	12,523.1	7,267.0	86.0	84.1	90.00	4,480.6	-1,154.7	375.5	212.4	163.05	2.303		
12,300.0	7,267.0	12,623.0	7,267.0	87.6	85.7	90.00	4,580.4	-1,150.2	379.7	213.2	166.51	2.280		
12,400.0	7,267.0	12,722.9	7,267.0	89.3	87.4	90.00	4,680.2	-1,145.6	383.9	214.0	169.97	2.259		
12,500.0	7,267.0	12,822.9	7,267.0	90.9	89.1	90.00	4,780.0	-1,141.0	388.2	214.7	173.43	2.238		
12,600.0	7,267.0	12,922.8	7,267.0	92.6	90.7	90.00	4,879.8	-1,136.4	392.4	215.5	176.89	2.218		
12,700.0	7,267.0	13,022.7	7,267.0	94.3	92.4	90.00	4,979.6	-1,131.9	396.6	216.3	180.35	2.199		
12,800.0	7,267.0	13,122.6	7,267.0	95.9	94.1	90.00	5,079.5	-1,127.3	400.9	217.0	183.82	2.181		
12,900.0	7,267.0	13,222.5	7,267.0	97.6	95.7	90.00	5,179.3	-1,122.7	405.1	217.8	187.29	2.163		
13,000.0	7,267.0	13,322.4	7,267.0	99.3	97.4	90.00	5,279.1	-1,118.1	409.3	218.6	190.76	2.146		
13,100.0	7,267.0	13,422.3	7,267.0	100.9	99.1	90.00	5,378.9	-1,113.6	413.6	219.3	194.23	2.129		
13,200.0	7,267.0	13,522.2	7,267.0	102.6	100.8	90.00	5,478.7	-1,109.0	417.8	220.1	197.70	2.113		
13,300.0	7,267.0	13,622.1	7,267.0	104.3	102.5	90.00	5,578.5	-1,104.4	422.0	220.8	201.17	2.098		
13,400.0	7,267.0	13,722.1	7,267.0	106.0	104.2	90.00	5,678.3	-1,099.8	426.2	221.6	204.65	2.083		
13,500.0	7,267.0	13,822.0	7,267.0	107.6	105.9	90.00	5,778.1	-1,095.2	430.5	222.4	208.12	2.068		
13,600.0	7,267.0	13,921.9	7,267.0	109.3	107.5	90.00	5,877.9	-1,090.7	434.7	223.1	211.60	2.054		
13,700.0	7,267.0	14,021.8	7,267.0	111.0	109.2	90.00	5,977.7	-1,086.1	438.9	223.9	215.08	2.041		
13,800.0	7,267.0	14,121.7	7,267.0	112.7	110.9	90.00	6,077.5	-1,081.5	443.2	224.6	218.55	2.028		
13,900.0	7,267.0	14,221.6	7,267.0	114.4	112.6	90.00	6,177.3	-1,076.9	447.4	225.4	222.03	2.015		
14,000.0	7,267.0	14,321.5	7,267.0	116.1	114.3	90.00	6,277.1	-1,072.4	451.6	226.1	225.51	2.003		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #2		Offset Site Error:		0.0 ft	
Survey Program:													0-Geolink MWD		Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning					
14,100.0	7,267.0	14,421.4	7,267.0	117.8	116.0	90.00	6,376.9	-1,067.8	455.9	226.9	228.99	1.991						
14,200.0	7,267.0	14,521.3	7,267.0	119.5	117.7	90.00	6,476.7	-1,063.2	460.1	227.6	232.47	1.979						
14,265.5	7,267.0	14,586.8	7,267.0	120.6	118.9	90.00	6,542.1	-1,060.2	462.9	228.1	234.76	1.972 SF						

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	29.9	29.9					
100.0	100.0	100.0	100.0	0.1	0.1	90.04	0.0	29.9	29.9	29.7	0.24	122.440		
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	29.9	29.9	29.3	0.59	50.416 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-161.87	0.0	29.9	31.6	30.6	0.94	33.497		
400.0	399.8	400.3	400.3	0.7	0.6	-163.92	-0.3	29.6	36.3	35.0	1.29	28.057		
500.0	499.5	501.1	501.0	0.9	0.8	-163.83	-3.0	27.2	42.1	40.5	1.65	25.561		
600.0	598.7	602.0	601.7	1.2	1.0	-161.98	-8.2	22.4	48.9	46.9	2.02	24.174		
700.0	697.5	702.9	702.0	1.5	1.3	-159.08	-16.0	15.2	56.6	54.1	2.43	23.265		
800.0	795.6	803.8	801.9	1.9	1.5	-155.64	-26.5	5.7	65.4	62.5	2.91	22.508		
884.5	878.0	888.9	885.7	2.2	1.8	-152.58	-37.3	-4.2	73.8	70.5	3.37	21.900		
900.0	893.1	904.3	900.9	2.3	1.9	-152.08	-39.3	-6.1	75.5	72.0	3.46	21.808		
1,000.0	990.2	1,003.6	998.5	2.7	2.2	-149.31	-52.8	-18.5	86.4	82.3	4.07	21.230		
1,100.0	1,087.4	1,103.0	1,096.1	3.2	2.5	-147.17	-66.2	-30.8	97.4	92.7	4.70	20.706		
1,200.0	1,184.5	1,202.3	1,193.8	3.6	2.9	-145.46	-79.7	-43.1	108.5	103.2	5.36	20.251		
1,300.0	1,281.7	1,301.6	1,291.4	4.1	3.2	-144.08	-93.1	-55.5	119.8	113.7	6.03	19.861		
1,400.0	1,378.9	1,400.9	1,389.1	4.5	3.6	-142.93	-106.6	-67.8	131.0	124.3	6.71	19.528		
1,500.0	1,476.0	1,500.3	1,486.7	5.0	4.0	-141.96	-120.0	-80.1	142.3	134.9	7.40	19.243		
1,600.0	1,573.2	1,599.6	1,584.4	5.4	4.3	-141.14	-133.5	-92.5	153.7	145.6	8.09	18.997		
1,700.0	1,670.3	1,698.9	1,682.0	5.9	4.7	-140.43	-146.9	-104.8	165.1	156.3	8.79	18.784		
1,800.0	1,767.5	1,798.3	1,779.6	6.3	5.0	-139.81	-160.3	-117.1	176.5	167.0	9.49	18.598		
1,900.0	1,864.7	1,897.6	1,877.3	6.8	5.4	-139.26	-173.8	-129.5	187.9	177.7	10.19	18.435		
2,000.0	1,961.8	1,996.9	1,974.9	7.2	5.8	-138.78	-187.2	-141.8	199.3	188.4	10.90	18.290		
2,100.0	2,059.0	2,096.3	2,072.6	7.7	6.1	-138.35	-200.7	-154.1	210.7	199.1	11.60	18.161		
2,200.0	2,156.1	2,195.6	2,170.2	8.1	6.5	-137.97	-214.1	-166.5	222.2	209.9	12.31	18.045		
2,300.0	2,253.3	2,294.9	2,267.8	8.6	6.8	-137.62	-227.6	-178.8	233.7	220.6	13.02	17.942		
2,400.0	2,350.4	2,394.3	2,365.5	9.1	7.2	-137.30	-241.0	-191.1	245.1	231.4	13.73	17.848		
2,500.0	2,447.6	2,493.6	2,463.1	9.5	7.6	-137.02	-254.5	-203.5	256.6	242.2	14.45	17.762		
2,600.0	2,544.8	2,592.9	2,560.8	10.0	7.9	-136.75	-267.9	-215.8	268.1	252.9	15.16	17.685		
2,700.0	2,641.9	2,692.3	2,658.4	10.4	8.3	-136.51	-281.4	-228.1	279.6	263.7	15.87	17.613		
2,800.0	2,739.1	2,791.6	2,756.0	10.9	8.6	-136.29	-294.8	-240.5	291.1	274.5	16.59	17.548		
2,900.0	2,836.2	2,890.9	2,853.7	11.3	9.0	-136.09	-308.2	-252.8	302.5	285.2	17.30	17.488		
3,000.0	2,933.4	2,990.3	2,951.3	11.8	9.4	-135.90	-321.7	-265.1	314.0	296.0	18.02	17.432		
3,100.0	3,030.6	3,089.6	3,049.0	12.3	9.7	-135.72	-335.1	-277.5	325.5	306.8	18.73	17.380		
3,200.0	3,127.7	3,188.9	3,146.6	12.7	10.1	-135.56	-348.6	-289.8	337.1	317.6	19.45	17.332		
3,300.0	3,224.9	3,288.2	3,244.3	13.2	10.5	-135.40	-362.0	-302.1	348.6	328.4	20.16	17.288		
3,400.0	3,322.0	3,387.6	3,341.9	13.6	10.8	-135.26	-375.5	-314.5	360.1	339.2	20.88	17.246		
3,500.0	3,419.2	3,486.9	3,439.5	14.1	11.2	-135.12	-388.9	-326.8	371.6	350.0	21.60	17.207		
3,600.0	3,516.4	3,586.2	3,537.2	14.5	11.6	-135.00	-402.4	-339.1	383.1	360.8	22.31	17.170		
3,700.0	3,613.5	3,685.6	3,634.8	15.0	11.9	-134.88	-415.8	-351.5	394.6	371.6	23.03	17.136		
3,800.0	3,710.7	3,784.9	3,732.5	15.5	12.3	-134.76	-429.3	-363.8	406.1	382.4	23.75	17.103		
3,900.0	3,807.8	3,884.2	3,830.1	15.9	12.6	-134.66	-442.7	-376.1	417.6	393.2	24.46	17.072		
4,000.0	3,905.0	3,983.6	3,927.7	16.4	13.0	-134.56	-456.1	-388.5	429.2	404.0	25.18	17.044		
4,100.0	4,002.2	4,082.9	4,025.4	16.8	13.4	-134.46	-469.6	-400.8	440.7	414.8	25.90	17.016		
4,200.0	4,099.3	4,182.2	4,123.0	17.3	13.7	-134.37	-483.0	-413.1	452.2	425.6	26.62	16.990		
4,300.0	4,196.5	4,281.6	4,220.7	17.7	14.1	-134.29	-496.5	-425.5	463.7	436.4	27.33	16.966		
4,400.0	4,293.6	4,380.9	4,318.3	18.2	14.5	-134.20	-509.9	-437.8	475.3	447.2	28.05	16.942		
4,500.0	4,390.8	4,480.2	4,416.0	18.7	14.8	-134.13	-523.4	-450.1	486.8	458.0	28.77	16.920		
4,600.0	4,487.9	4,579.6	4,513.6	19.1	15.2	-134.05	-536.8	-462.5	498.3	468.8	29.49	16.899		
4,700.0	4,585.1	4,678.9	4,611.2	19.6	15.6	-133.98	-550.3	-474.8	509.8	479.6	30.21	16.879		
4,800.0	4,682.3	4,778.2	4,708.9	20.0	15.9	-133.91	-563.7	-487.1	521.4	490.4	30.92	16.859		
4,900.0	4,779.4	4,877.6	4,806.5	20.5	16.3	-133.85	-577.2	-499.5	532.9	501.2	31.64	16.841		
5,000.0	4,876.6	4,976.9	4,904.2	20.9	16.7	-133.79	-590.6	-511.8	544.4	512.0	32.36	16.823		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	4,973.7	5,076.2	5,001.8	21.4	17.0	-133.73	-604.0	-524.1	555.9	522.9	33.08	16.807		
5,200.0	5,070.9	5,175.5	5,099.4	21.9	17.4	-133.67	-617.5	-536.5	567.5	533.7	33.80	16.790		
5,300.0	5,168.1	5,274.9	5,197.1	22.3	17.7	-133.61	-630.9	-548.8	579.0	544.5	34.52	16.775		
5,400.0	5,265.2	5,374.2	5,294.7	22.8	18.1	-133.56	-644.4	-561.1	590.5	555.3	35.23	16.760		
5,500.0	5,362.4	5,473.5	5,392.4	23.2	18.5	-133.51	-657.8	-573.5	602.1	566.1	35.95	16.746		
5,600.0	5,459.5	5,572.9	5,490.0	23.7	18.8	-133.46	-671.3	-585.8	613.6	576.9	36.67	16.732		
5,700.0	5,556.7	5,672.2	5,587.7	24.1	19.2	-133.41	-684.7	-598.1	625.1	587.7	37.39	16.719		
5,800.0	5,653.9	5,771.5	5,685.3	24.6	19.6	-133.37	-698.2	-610.5	636.7	598.5	38.11	16.706		
5,900.0	5,751.0	5,870.9	5,782.9	25.1	19.9	-133.32	-711.6	-622.8	648.2	609.4	38.83	16.694		
6,000.0	5,848.2	5,970.2	5,880.6	25.5	20.3	-133.28	-725.1	-635.1	659.7	620.2	39.55	16.682		
6,100.0	5,945.3	6,069.5	5,978.2	26.0	20.7	-133.24	-738.5	-647.5	671.3	631.0	40.27	16.671		
6,200.0	6,042.5	6,168.9	6,075.9	26.4	21.0	-133.20	-751.9	-659.8	682.8	641.8	40.98	16.660		
6,300.0	6,139.6	6,268.2	6,173.5	26.9	21.4	-133.16	-765.4	-672.1	694.3	652.6	41.70	16.649		
6,400.0	6,236.8	6,367.5	6,271.1	27.3	21.8	-133.13	-778.8	-684.5	705.9	663.4	42.42	16.639		
6,500.0	6,334.0	6,466.9	6,368.8	27.8	22.1	-133.09	-792.3	-696.8	717.4	674.2	43.14	16.629		
6,600.0	6,431.1	6,566.2	6,466.4	28.3	22.5	-133.06	-805.7	-709.1	728.9	685.1	43.86	16.619		
6,700.0	6,528.3	6,665.5	6,564.1	28.7	22.8	-133.02	-819.2	-721.5	740.5	695.9	44.58	16.610		
6,800.0	6,625.4	6,764.9	6,661.7	29.2	23.2	-132.99	-832.6	-733.8	752.0	706.7	45.30	16.601		
6,840.6	6,664.9	6,805.2	6,701.4	29.4	23.4	-132.98	-838.1	-738.8	756.7	711.1	45.59	16.597		
6,850.0	6,674.0	6,814.5	6,710.5	29.4	23.4	-136.80	-839.3	-740.0	757.8	712.2	45.60	16.618		
6,900.0	6,722.7	6,863.9	6,759.1	29.6	23.6	-158.58	-846.0	-746.1	765.0	719.4	45.54	16.797		
6,950.0	6,771.3	6,912.6	6,806.9	29.8	23.8	-178.68	-852.6	-752.1	774.2	728.8	45.33	17.080		
7,000.0	6,819.4	6,962.5	6,856.0	29.9	23.9	166.32	-859.4	-758.3	785.4	740.5	44.97	17.467		
7,050.0	6,866.7	7,114.2	7,006.1	30.1	24.2	157.13	-859.0	-777.3	795.6	750.8	44.81	17.753		
7,100.0	6,912.8	7,277.0	7,160.9	30.2	24.0	149.76	-814.6	-796.8	801.0	757.5	43.53	18.403		
7,150.0	6,957.3	7,436.7	7,294.8	30.3	23.4	142.98	-730.2	-813.8	801.5	760.3	41.23	19.440		
7,200.0	6,999.9	7,580.8	7,391.7	30.3	22.7	136.55	-624.8	-826.0	797.8	759.4	38.38	20.785		
7,250.0	7,040.4	7,704.1	7,451.7	30.4	22.1	130.64	-517.6	-833.6	791.2	755.6	35.53	22.265		
7,300.0	7,078.2	7,807.6	7,483.6	30.4	21.6	125.41	-419.4	-837.6	782.9	749.8	33.05	23.687		
7,350.0	7,113.3	7,894.7	7,496.5	30.5	21.3	120.88	-333.4	-839.2	773.9	742.8	31.08	24.900		
7,400.0	7,145.3	7,954.3	7,498.0	30.5	21.1	117.70	-273.8	-839.4	765.2	735.4	29.81	25.668		
7,450.0	7,174.0	7,994.7	7,498.0	30.5	21.0	115.67	-233.4	-839.4	758.2	729.3	28.98	26.164		
7,500.0	7,199.1	8,037.5	7,498.0	30.6	21.0	113.77	-190.5	-839.4	753.0	724.7	28.34	26.571		
7,550.0	7,220.5	8,082.5	7,498.0	30.6	20.9	112.08	-145.6	-839.4	749.2	721.3	27.88	26.873		
7,600.0	7,238.0	8,129.1	7,498.0	30.6	20.9	110.63	-99.0	-839.4	746.5	718.9	27.63	27.020		
7,650.0	7,251.5	8,177.2	7,498.0	30.7	20.9	109.47	-50.9	-839.4	744.7	717.1	27.56	27.016		
7,700.0	7,260.8	8,226.2	7,498.0	30.7	21.0	108.65	-1.8	-839.4	743.5	715.8	27.68	26.863		
7,750.0	7,265.9	8,275.9	7,498.0	30.8	21.0	108.21	47.9	-839.4	742.9	714.9	27.93	26.599		
7,785.5	7,267.0	8,311.4	7,498.0	30.9	21.1	108.12	83.3	-839.4	742.6	714.5	28.17	26.359		
7,800.0	7,267.0	8,325.9	7,498.0	30.9	21.2	108.12	97.8	-839.4	742.6	714.3	28.29	26.245		
7,900.0	7,267.0	8,425.9	7,498.0	31.1	21.5	108.13	197.8	-839.4	742.3	713.0	29.27	25.357		
8,000.0	7,267.0	8,525.9	7,498.0	31.4	22.0	108.14	297.8	-839.4	741.9	711.3	30.59	24.257		
8,100.0	7,267.0	8,625.9	7,498.0	31.8	22.6	108.15	397.8	-839.4	741.6	709.4	32.19	23.037		
8,200.0	7,267.0	8,725.9	7,498.0	32.3	23.4	108.16	497.8	-839.4	741.3	707.2	34.05	21.770		
8,300.0	7,267.0	8,825.9	7,498.0	32.9	24.2	108.17	597.8	-839.4	740.9	704.8	36.12	20.513		
8,400.0	7,267.0	8,925.9	7,498.0	33.6	25.1	108.17	697.8	-839.4	740.6	702.2	38.37	19.302		
8,500.0	7,267.0	9,025.9	7,498.0	34.3	26.1	108.18	797.8	-839.4	740.3	699.5	40.77	18.159		
8,600.0	7,267.0	9,125.9	7,498.0	35.1	27.2	108.19	897.8	-839.4	739.9	696.6	43.29	17.093		
8,700.0	7,267.0	9,225.9	7,498.0	36.0	28.4	108.20	997.8	-839.4	739.6	693.7	45.91	16.109		
8,800.0	7,267.0	9,325.9	7,498.0	36.9	29.6	108.21	1,097.8	-839.4	739.3	690.6	48.63	15.203		
8,900.0	7,267.0	9,425.9	7,498.0	37.9	30.9	108.22	1,197.8	-839.4	738.9	687.5	51.41	14.373		
9,000.0	7,267.0	9,525.9	7,498.0	39.0	32.2	108.23	1,297.8	-839.4	738.6	684.4	54.26	13.613		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,100.0	7,267.0	9,625.9	7,498.0	40.1	33.6	108.23	1,397.8	-839.4	738.3	681.1	57.16	12.917	
9,200.0	7,267.0	9,725.9	7,498.0	41.3	35.0	108.24	1,497.8	-839.4	737.9	677.8	60.10	12.279	
9,300.0	7,267.0	9,825.9	7,498.0	42.5	36.4	108.25	1,597.8	-839.4	737.6	674.5	63.08	11.693	
9,400.0	7,267.0	9,925.9	7,498.0	43.7	37.8	108.26	1,697.8	-839.4	737.3	671.2	66.10	11.155	
9,500.0	7,267.0	10,025.9	7,498.0	45.0	39.3	108.27	1,797.8	-839.4	737.0	667.8	69.14	10.659	
9,600.0	7,267.0	10,125.9	7,498.0	46.3	40.8	108.28	1,897.8	-839.4	736.6	664.4	72.21	10.201	
9,700.0	7,267.0	10,225.9	7,498.0	47.6	42.3	108.28	1,997.8	-839.4	736.3	661.0	75.30	9.778	
9,800.0	7,267.0	10,325.9	7,498.0	48.9	43.9	108.29	2,097.8	-839.4	736.0	657.6	78.41	9.386	
9,900.0	7,267.0	10,425.9	7,498.0	50.3	45.4	108.30	2,197.8	-839.4	735.6	654.1	81.53	9.022	
10,000.0	7,267.0	10,525.9	7,498.0	51.7	47.0	108.31	2,297.8	-839.4	735.3	650.6	84.68	8.684	
10,100.0	7,267.0	10,625.9	7,498.0	53.2	48.6	108.32	2,397.8	-839.4	735.0	647.1	87.83	8.368	
10,200.0	7,267.0	10,725.9	7,498.0	54.6	50.1	108.33	2,497.8	-839.4	734.6	643.6	91.00	8.073	
10,300.0	7,267.0	10,825.9	7,498.0	56.1	51.7	108.34	2,597.8	-839.4	734.3	640.1	94.18	7.797	
10,400.0	7,267.0	10,925.9	7,498.0	57.6	53.4	108.34	2,697.8	-839.4	734.0	636.6	97.37	7.538	
10,500.0	7,267.0	11,025.9	7,498.0	59.0	55.0	108.35	2,797.8	-839.4	733.6	633.1	100.56	7.295	
10,600.0	7,267.0	11,125.9	7,498.0	60.6	56.6	108.36	2,897.8	-839.4	733.3	629.5	103.77	7.067	
10,700.0	7,267.0	11,225.9	7,498.0	62.1	58.2	108.37	2,997.8	-839.4	733.0	626.0	106.98	6.851	
10,800.0	7,267.0	11,325.9	7,498.0	63.6	59.9	108.38	3,097.8	-839.4	732.6	622.4	110.20	6.648	
10,900.0	7,267.0	11,425.9	7,498.0	65.2	61.5	108.39	3,197.8	-839.4	732.3	618.9	113.42	6.456	
11,000.0	7,267.0	11,525.9	7,498.0	66.7	63.2	108.40	3,297.8	-839.4	732.0	615.3	116.65	6.275	
11,100.0	7,267.0	11,625.9	7,498.0	68.3	64.8	108.40	3,397.8	-839.4	731.7	611.8	119.89	6.103	
11,200.0	7,267.0	11,725.9	7,498.0	69.9	66.5	108.41	3,497.8	-839.4	731.3	608.2	123.13	5.940	
11,300.0	7,267.0	11,825.9	7,498.0	71.4	68.2	108.42	3,597.8	-839.4	731.0	604.6	126.37	5.784	
11,400.0	7,267.0	11,925.9	7,498.0	73.0	69.8	108.43	3,697.8	-839.4	730.7	601.0	129.62	5.637	
11,500.0	7,267.0	12,025.9	7,498.0	74.6	71.5	108.44	3,797.8	-839.4	730.3	597.5	132.87	5.497	
11,600.0	7,267.0	12,125.9	7,498.0	76.2	73.2	108.45	3,897.8	-839.4	730.0	593.9	136.12	5.363	
11,700.0	7,267.0	12,225.9	7,498.0	77.9	74.9	108.46	3,997.8	-839.4	729.7	590.3	139.38	5.235	
11,800.0	7,267.0	12,325.9	7,498.0	79.5	76.6	108.47	4,097.8	-839.4	729.3	586.7	142.64	5.113	
11,900.0	7,267.0	12,425.9	7,498.0	81.1	78.3	108.47	4,197.8	-839.4	729.0	583.1	145.90	4.997	
12,000.0	7,267.0	12,525.9	7,498.0	82.7	79.9	108.48	4,297.8	-839.4	728.7	579.5	149.17	4.885	
12,100.0	7,267.0	12,625.9	7,498.0	84.4	81.6	108.49	4,397.8	-839.4	728.3	575.9	152.43	4.778	
12,200.0	7,267.0	12,725.9	7,498.0	86.0	83.3	108.50	4,497.8	-839.4	728.0	572.3	155.70	4.676	
12,300.0	7,267.0	12,825.9	7,498.0	87.6	85.0	108.51	4,597.8	-839.4	727.7	568.7	158.97	4.577	
12,400.0	7,267.0	12,925.9	7,498.0	89.3	86.7	108.52	4,697.8	-839.4	727.3	565.1	162.24	4.483	
12,500.0	7,267.0	13,025.9	7,498.0	90.9	88.4	108.53	4,797.8	-839.4	727.0	561.5	165.52	4.392	
12,600.0	7,267.0	13,125.9	7,498.0	92.6	90.2	108.54	4,897.8	-839.4	726.7	557.9	168.79	4.305	
12,700.0	7,267.0	13,225.9	7,498.0	94.3	91.9	108.54	4,997.8	-839.4	726.4	554.3	172.07	4.221	
12,800.0	7,267.0	13,325.9	7,498.0	95.9	93.6	108.55	5,097.8	-839.4	726.0	550.7	175.35	4.140	
12,900.0	7,267.0	13,425.9	7,498.0	97.6	95.3	108.56	5,197.8	-839.4	725.7	547.1	178.63	4.063	
13,000.0	7,267.0	13,525.9	7,498.0	99.3	97.0	108.57	5,297.8	-839.4	725.4	543.5	181.91	3.988	
13,100.0	7,267.0	13,625.9	7,498.0	100.9	98.7	108.58	5,397.8	-839.4	725.0	539.8	185.19	3.915	
13,200.0	7,267.0	13,725.9	7,498.0	102.6	100.4	108.59	5,497.8	-839.4	724.7	536.2	188.47	3.845	
13,300.0	7,267.0	13,825.9	7,498.0	104.3	102.1	108.60	5,597.8	-839.4	724.4	532.6	191.75	3.778	
13,400.0	7,267.0	13,925.9	7,498.0	106.0	103.9	108.61	5,697.8	-839.4	724.0	529.0	195.04	3.712	
13,500.0	7,267.0	14,025.9	7,498.0	107.6	105.6	108.61	5,797.8	-839.4	723.7	525.4	198.32	3.649	
13,600.0	7,267.0	14,125.9	7,498.0	109.3	107.3	108.62	5,897.8	-839.4	723.4	521.8	201.61	3.588	
13,700.0	7,267.0	14,225.9	7,498.0	111.0	109.0	108.63	5,997.8	-839.4	723.0	518.1	204.89	3.529	
13,800.0	7,267.0	14,325.9	7,498.0	112.7	110.7	108.64	6,097.8	-839.4	722.7	514.5	208.18	3.472	
13,900.0	7,267.0	14,425.9	7,498.0	114.4	112.5	108.65	6,197.8	-839.4	722.4	510.9	211.47	3.416	
14,000.0	7,267.0	14,525.9	7,498.0	116.1	114.2	108.66	6,297.8	-839.4	722.0	507.3	214.76	3.362	
14,100.0	7,267.0	14,625.9	7,498.0	117.8	115.9	108.67	6,397.8	-839.4	721.7	503.7	218.04	3.310	
14,200.0	7,267.0	14,725.9	7,498.0	119.5	117.6	108.68	6,497.8	-839.4	721.4	500.1	221.33	3.259	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design												S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - 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		Vertical Depth		Measured Depth		Vertical Depth		Reference		Offset		Highside Toolface		Offset Wellbore Centre		Between Centres		Between Ellipses		Total Uncertainty Axis		Separation Factor		Warning			
(ft)		(ft)		(ft)		(ft)		(ft)		(ft)		(°)		+N/-S (ft)		+E/-W (ft)		(ft)		(ft)							
14,254.9		7,267.0		14,780.8		7,498.0		120.4		118.6		108.68		6,552.7		-839.4		721.2		498.1		223.14		3.232			
14,265.5		7,267.0		14,786.3		7,498.0		120.6		118.7		108.68		6,558.2		-839.4		721.2		497.8		223.40		3.228 SF			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4E-17H-P267 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	40.0	40.0					
100.0	100.0	100.0	100.0	0.1	0.1	90.04	0.0	40.0	40.0	39.7	0.24	163.635		
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	40.0	40.0	39.4	0.59	67.379 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-161.62	0.0	40.0	41.6	40.7	0.94	44.175		
400.0	399.8	399.8	399.8	0.7	0.6	-163.62	0.0	40.0	46.6	45.3	1.29	36.098		
500.0	499.5	500.6	500.6	0.9	0.8	-164.72	-1.5	39.0	54.0	52.3	1.64	32.800		
600.0	598.7	601.5	601.4	1.2	1.0	-163.82	-5.9	36.0	62.5	60.5	2.01	31.081		
700.0	697.5	702.4	701.9	1.5	1.2	-161.66	-13.2	31.0	72.2	69.8	2.40	30.059		
800.0	795.6	803.3	801.9	1.9	1.5	-158.78	-23.4	24.0	83.4	80.6	2.85	29.285		
884.5	878.0	888.4	886.0	2.2	1.7	-156.07	-34.3	16.5	94.1	90.8	3.28	28.646		
900.0	893.1	903.8	901.2	2.3	1.8	-155.57	-36.5	15.0	96.1	92.8	3.37	28.531		
1,000.0	990.2	1,002.8	998.7	2.7	2.1	-152.84	-50.5	5.4	109.5	105.6	3.94	27.784		
1,100.0	1,087.4	1,101.8	1,096.2	3.2	2.4	-150.70	-64.6	-4.2	123.1	118.5	4.54	27.092		
1,200.0	1,184.5	1,200.8	1,193.7	3.6	2.7	-148.99	-78.7	-13.8	136.8	131.6	5.17	26.483		
1,300.0	1,281.7	1,299.7	1,291.3	4.1	3.1	-147.59	-92.7	-23.4	150.6	144.8	5.80	25.955		
1,400.0	1,378.9	1,398.7	1,388.8	4.5	3.4	-146.42	-106.8	-33.0	164.5	158.0	6.45	25.501		
1,500.0	1,476.0	1,497.7	1,486.3	5.0	3.7	-145.44	-120.8	-42.6	178.4	171.3	7.10	25.110		
1,600.0	1,573.2	1,596.7	1,583.8	5.4	4.1	-144.60	-134.9	-52.2	192.3	184.6	7.77	24.771		
1,700.0	1,670.3	1,695.7	1,681.3	5.9	4.4	-143.87	-148.9	-61.8	206.4	197.9	8.43	24.476		
1,800.0	1,767.5	1,794.7	1,778.8	6.3	4.7	-143.24	-163.0	-71.5	220.4	211.3	9.10	24.217		
1,900.0	1,864.7	1,893.6	1,876.3	6.8	5.1	-142.68	-177.0	-81.1	234.4	224.7	9.77	23.990		
2,000.0	1,961.8	1,992.6	1,973.8	7.2	5.4	-142.18	-191.1	-90.7	248.5	238.1	10.45	23.788		
2,100.0	2,059.0	2,091.6	2,071.3	7.7	5.8	-141.74	-205.2	-100.3	262.6	251.5	11.12	23.607		
2,200.0	2,156.1	2,190.6	2,168.8	8.1	6.1	-141.34	-219.2	-109.9	276.7	264.9	11.80	23.446		
2,300.0	2,253.3	2,289.6	2,266.3	8.6	6.4	-140.99	-233.3	-119.5	290.8	278.4	12.48	23.300		
2,400.0	2,350.4	2,388.6	2,363.8	9.1	6.8	-140.66	-247.3	-129.1	305.0	291.8	13.16	23.168		
2,500.0	2,447.6	2,487.5	2,461.3	9.5	7.1	-140.36	-261.4	-138.7	319.1	305.3	13.84	23.049		
2,600.0	2,544.8	2,586.5	2,558.8	10.0	7.5	-140.09	-275.4	-148.3	333.3	318.7	14.53	22.939		
2,700.0	2,641.9	2,685.5	2,656.4	10.4	7.8	-139.84	-289.5	-158.0	347.4	332.2	15.21	22.839		
2,800.0	2,739.1	2,784.5	2,753.9	10.9	8.2	-139.61	-303.5	-167.6	361.6	345.7	15.89	22.747		
2,900.0	2,836.2	2,883.5	2,851.4	11.3	8.5	-139.40	-317.6	-177.2	375.7	359.1	16.58	22.662		
3,000.0	2,933.4	2,982.5	2,948.9	11.8	8.8	-139.20	-331.6	-186.8	389.9	372.6	17.26	22.584		
3,100.0	3,030.6	3,081.4	3,046.4	12.3	9.2	-139.02	-345.7	-196.4	404.1	386.1	17.95	22.511		
3,200.0	3,127.7	3,180.4	3,143.9	12.7	9.5	-138.85	-359.8	-206.0	418.2	399.6	18.64	22.443		
3,300.0	3,224.9	3,279.4	3,241.4	13.2	9.9	-138.69	-373.8	-215.6	432.4	413.1	19.32	22.380		
3,400.0	3,322.0	3,378.4	3,338.9	13.6	10.2	-138.54	-387.9	-225.2	446.6	426.6	20.01	22.321		
3,500.0	3,419.2	3,477.4	3,436.4	14.1	10.6	-138.40	-401.9	-234.9	460.8	440.1	20.70	22.266		
3,600.0	3,516.4	3,576.3	3,533.9	14.5	10.9	-138.27	-416.0	-244.5	475.0	453.6	21.38	22.214		
3,700.0	3,613.5	3,675.3	3,631.4	15.0	11.3	-138.14	-430.0	-254.1	489.2	467.1	22.07	22.165		
3,800.0	3,710.7	3,774.3	3,728.9	15.5	11.6	-138.03	-444.1	-263.7	503.4	480.6	22.76	22.119		
3,900.0	3,807.8	3,873.3	3,826.4	15.9	11.9	-137.92	-458.1	-273.3	517.6	494.1	23.44	22.076		
4,000.0	3,905.0	3,972.3	3,923.9	16.4	12.3	-137.81	-472.2	-282.9	531.8	507.6	24.13	22.035		
4,100.0	4,002.2	4,071.3	4,021.5	16.8	12.6	-137.71	-486.2	-292.5	546.0	521.1	24.82	21.997		
4,200.0	4,099.3	4,170.2	4,119.0	17.3	13.0	-137.62	-500.3	-302.1	560.1	534.6	25.51	21.960		
4,300.0	4,196.5	4,269.2	4,216.5	17.7	13.3	-137.53	-514.4	-311.7	574.3	548.2	26.20	21.925		
4,400.0	4,293.6	4,368.2	4,314.0	18.2	13.7	-137.44	-528.4	-321.4	588.6	561.7	26.88	21.892		
4,500.0	4,390.8	4,467.2	4,411.5	18.7	14.0	-137.36	-542.5	-331.0	602.8	575.2	27.57	21.861		
4,600.0	4,487.9	4,566.2	4,509.0	19.1	14.4	-137.28	-556.5	-340.6	617.0	588.7	28.26	21.831		
4,700.0	4,585.1	4,665.2	4,606.5	19.6	14.7	-137.21	-570.6	-350.2	631.2	602.2	28.95	21.802		
4,800.0	4,682.3	4,764.1	4,704.0	20.0	15.0	-137.14	-584.6	-359.8	645.4	615.7	29.64	21.775		
4,900.0	4,779.4	4,863.1	4,801.5	20.5	15.4	-137.07	-598.7	-369.4	659.6	629.3	30.33	21.749		
5,000.0	4,876.6	4,962.1	4,899.0	20.9	15.7	-137.01	-612.7	-379.0	673.8	642.8	31.02	21.724		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4E-17H-P267 - DD - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	4,973.7	5,061.1	4,996.5	21.4	16.1	-136.94	-626.8	-388.6	688.0	656.3	31.70	21.700		
5,200.0	5,070.9	5,160.1	5,094.0	21.9	16.4	-136.88	-640.9	-398.2	702.2	669.8	32.39	21.677		
5,300.0	5,168.1	5,259.1	5,191.5	22.3	16.8	-136.83	-654.9	-407.9	716.4	683.3	33.08	21.655		
5,400.0	5,265.2	5,358.0	5,289.0	22.8	17.1	-136.77	-669.0	-417.5	730.6	696.9	33.77	21.634		
5,500.0	5,362.4	5,457.0	5,386.6	23.2	17.5	-136.72	-683.0	-427.1	744.8	710.4	34.46	21.614		
5,600.0	5,459.5	5,556.0	5,484.1	23.7	17.8	-136.67	-697.1	-436.7	759.1	723.9	35.15	21.594		
5,700.0	5,556.7	5,655.0	5,581.6	24.1	18.1	-136.62	-711.1	-446.3	773.3	737.4	35.84	21.576		
5,800.0	5,653.9	5,754.0	5,679.1	24.6	18.5	-136.57	-725.2	-455.9	787.5	750.9	36.53	21.558		
5,900.0	5,751.0	5,852.9	5,776.6	25.1	18.8	-136.52	-739.2	-465.5	801.7	764.5	37.22	21.540		
6,000.0	5,848.2	5,951.9	5,874.1	25.5	19.2	-136.48	-753.3	-475.1	815.9	778.0	37.91	21.524		
6,100.0	5,945.3	6,050.9	5,971.6	26.0	19.5	-136.44	-767.3	-484.7	830.1	791.5	38.60	21.507		
6,200.0	6,042.5	6,149.9	6,069.1	26.4	19.9	-136.40	-781.4	-494.4	844.3	805.1	39.29	21.492		
6,300.0	6,139.6	6,248.9	6,166.6	26.9	20.2	-136.36	-795.5	-504.0	858.6	818.6	39.98	21.477		
6,400.0	6,236.8	6,347.9	6,264.1	27.3	20.6	-136.32	-809.5	-513.6	872.8	832.1	40.67	21.462		
6,500.0	6,334.0	6,446.8	6,361.6	27.8	20.9	-136.28	-823.6	-523.2	887.0	845.6	41.36	21.448		
6,600.0	6,431.1	6,545.8	6,459.1	28.3	21.2	-136.24	-837.6	-532.8	901.2	859.2	42.04	21.434		
6,700.0	6,528.3	6,644.8	6,556.6	28.7	21.6	-136.21	-851.7	-542.4	915.4	872.7	42.73	21.421		
6,800.0	6,625.4	6,821.5	6,731.5	29.2	22.0	-136.82	-864.9	-559.7	928.0	884.8	43.25	21.457		
6,840.6	6,664.9	6,935.3	6,843.2	29.4	21.9	-138.68	-846.8	-570.7	928.9	886.2	42.61	21.799		
6,850.0	6,674.0	6,959.9	6,866.7	29.4	21.9	-142.95	-840.0	-573.0	928.7	886.3	42.36	21.922		
6,900.0	6,722.7	7,080.2	6,976.4	29.6	21.5	-167.29	-792.4	-583.8	926.6	885.9	40.70	22.768		
6,950.0	6,771.3	7,183.0	7,060.6	29.8	21.0	169.95	-734.2	-592.1	923.4	884.7	38.75	23.829		
7,000.0	6,819.4	7,270.8	7,123.4	29.9	20.5	152.36	-673.2	-598.3	919.8	883.0	36.76	25.019		
7,050.0	6,866.7	7,346.7	7,169.6	30.1	20.0	139.62	-613.3	-602.8	916.3	881.5	34.88	26.274		
7,100.0	6,912.8	7,413.3	7,203.4	30.2	19.6	130.27	-556.1	-606.2	913.4	880.3	33.16	27.550		
7,150.0	6,957.3	7,472.7	7,227.8	30.3	19.3	123.14	-501.9	-608.6	911.3	879.7	31.64	28.806		
7,200.0	6,999.9	7,526.6	7,244.9	30.3	19.0	117.45	-450.9	-610.3	910.0	879.7	30.33	30.001		
7,241.7	7,033.8	7,568.2	7,254.9	30.4	18.8	113.47	-410.6	-611.2	909.7	880.3	29.42	30.923		
7,250.0	7,040.4	7,576.2	7,256.5	30.4	18.7	112.74	-402.8	-611.4	909.7	880.5	29.26	31.095		
7,300.0	7,078.2	7,622.3	7,263.4	30.4	18.5	108.72	-357.2	-612.1	910.3	881.9	28.40	32.051		
7,350.0	7,113.3	7,665.7	7,266.6	30.5	18.3	105.19	-313.9	-612.4	911.9	884.1	27.76	32.845		
7,400.0	7,145.3	7,705.8	7,267.0	30.5	18.2	102.11	-273.8	-612.4	914.2	886.9	27.33	33.448		
7,450.0	7,174.0	7,746.2	7,267.0	30.5	18.1	99.36	-233.4	-612.4	917.2	890.2	27.08	33.869		
7,500.0	7,199.1	7,789.1	7,267.0	30.6	18.0	96.90	-190.5	-612.4	920.6	893.7	26.92	34.194		
7,550.0	7,220.5	7,834.0	7,267.0	30.6	17.9	94.76	-145.6	-612.4	924.1	897.1	26.91	34.336		
7,600.0	7,238.0	7,880.6	7,267.0	30.6	17.9	92.98	-99.0	-612.4	927.2	900.2	26.96	34.390		
7,650.0	7,251.5	7,928.7	7,267.0	30.7	17.9	91.59	-50.9	-612.4	929.8	902.7	27.10	34.306		
7,700.0	7,260.8	7,977.7	7,267.0	30.7	18.0	90.63	-1.8	-612.4	931.7	904.4	27.27	34.162		
7,750.0	7,265.9	8,027.5	7,267.0	30.8	18.1	90.10	47.9	-612.4	932.7	905.1	27.52	33.894		
7,785.5	7,267.0	8,062.9	7,267.0	30.9	18.2	90.00	83.3	-612.4	932.8	905.1	27.73	33.643		
7,800.0	7,267.0	8,077.4	7,267.0	30.9	18.2	90.00	97.8	-612.4	932.7	904.9	27.84	33.504		
7,900.0	7,267.0	8,177.4	7,267.0	31.1	18.7	90.00	197.8	-612.4	932.4	903.5	28.89	32.272		
8,000.0	7,267.0	8,277.4	7,267.0	31.4	19.2	90.00	297.8	-612.4	932.0	901.7	30.32	30.745		
8,100.0	7,267.0	8,377.4	7,267.0	31.8	19.9	90.00	397.8	-612.4	931.7	899.6	32.06	29.059		
8,200.0	7,267.0	8,477.4	7,267.0	32.3	20.7	90.00	497.8	-612.4	931.3	897.3	34.08	27.328		
8,300.0	7,267.0	8,577.4	7,267.0	32.9	21.7	90.00	597.8	-612.4	931.0	894.7	36.33	25.628		
8,400.0	7,267.0	8,677.4	7,267.0	33.6	22.7	90.00	697.8	-612.4	930.6	891.9	38.76	24.010		
8,500.0	7,267.0	8,777.4	7,267.0	34.3	23.8	90.00	797.8	-612.4	930.3	888.9	41.35	22.498		
8,600.0	7,267.0	8,877.4	7,267.0	35.1	25.0	90.00	897.8	-612.4	929.9	885.9	44.07	21.103		
8,700.0	7,267.0	8,977.4	7,267.0	36.0	26.3	90.00	997.8	-612.4	929.6	882.7	46.89	19.826		
8,800.0	7,267.0	9,077.4	7,267.0	36.9	27.6	90.00	1,097.8	-612.4	929.2	879.4	49.80	18.661		
8,900.0	7,267.0	9,177.4	7,267.0	37.9	29.0	90.00	1,197.8	-612.4	928.9	876.1	52.78	17.600		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4E-17H-P267 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,267.0	9,277.4	7,267.0	39.0	30.4	90.00	1,297.8	-612.4	928.5	872.7	55.82	16.634	
9,100.0	7,267.0	9,377.4	7,267.0	40.1	31.8	90.00	1,397.8	-612.4	928.2	869.3	58.92	15.755	
9,200.0	7,267.0	9,477.4	7,267.0	41.3	33.3	90.00	1,497.8	-612.4	927.8	865.8	62.05	14.952	
9,300.0	7,267.0	9,577.4	7,267.0	42.5	34.7	90.00	1,597.8	-612.4	927.5	862.3	65.23	14.219	
9,400.0	7,267.0	9,677.4	7,267.0	43.7	36.3	90.00	1,697.8	-612.4	927.1	858.7	68.44	13.547	
9,500.0	7,267.0	9,777.4	7,267.0	45.0	37.8	90.00	1,797.8	-612.4	926.8	855.1	71.68	12.930	
9,600.0	7,267.0	9,877.4	7,267.0	46.3	39.3	90.00	1,897.8	-612.4	926.4	851.5	74.94	12.363	
9,700.0	7,267.0	9,977.4	7,267.0	47.6	40.9	90.00	1,997.8	-612.4	926.1	847.9	78.22	11.839	
9,800.0	7,267.0	10,077.4	7,267.0	48.9	42.5	90.00	2,097.8	-612.4	925.7	844.2	81.52	11.356	
9,900.0	7,267.0	10,177.4	7,267.0	50.3	44.1	90.00	2,197.8	-612.4	925.4	840.6	84.84	10.907	
10,000.0	7,267.0	10,277.4	7,267.0	51.7	45.7	90.00	2,297.8	-612.4	925.0	836.9	88.17	10.491	
10,100.0	7,267.0	10,377.4	7,267.0	53.2	47.3	90.00	2,397.8	-612.4	924.7	833.2	91.52	10.104	
10,200.0	7,267.0	10,477.4	7,267.0	54.6	49.0	90.00	2,497.8	-612.4	924.4	829.5	94.88	9.743	
10,300.0	7,267.0	10,577.4	7,267.0	56.1	50.6	90.00	2,597.8	-612.4	924.0	825.8	98.25	9.405	
10,400.0	7,267.0	10,677.4	7,267.0	57.6	52.2	90.00	2,697.8	-612.4	923.7	822.0	101.62	9.089	
10,500.0	7,267.0	10,777.4	7,267.0	59.0	53.9	90.00	2,797.8	-612.4	923.3	818.3	105.01	8.793	
10,600.0	7,267.0	10,877.4	7,267.0	60.6	55.5	90.00	2,897.8	-612.4	923.0	814.6	108.40	8.514	
10,700.0	7,267.0	10,977.4	7,267.0	62.1	57.2	90.00	2,997.8	-612.4	922.6	810.8	111.80	8.252	
10,800.0	7,267.0	11,077.4	7,267.0	63.6	58.9	90.00	3,097.8	-612.4	922.3	807.0	115.21	8.005	
10,900.0	7,267.0	11,177.4	7,267.0	65.2	60.5	90.00	3,197.8	-612.4	921.9	803.3	118.62	7.772	
11,000.0	7,267.0	11,277.4	7,267.0	66.7	62.2	90.00	3,297.8	-612.4	921.6	799.5	122.04	7.551	
11,100.0	7,267.0	11,377.4	7,267.0	68.3	63.9	90.00	3,397.8	-612.4	921.2	795.7	125.47	7.342	
11,200.0	7,267.0	11,477.4	7,267.0	69.9	65.6	90.00	3,497.8	-612.4	920.9	792.0	128.89	7.144	
11,300.0	7,267.0	11,577.4	7,267.0	71.4	67.3	90.00	3,597.8	-612.4	920.5	788.2	132.33	6.956	
11,400.0	7,267.0	11,677.4	7,267.0	73.0	69.0	90.00	3,697.8	-612.4	920.2	784.4	135.76	6.778	
11,500.0	7,267.0	11,777.4	7,267.0	74.6	70.7	90.00	3,797.8	-612.4	919.8	780.6	139.20	6.608	
11,600.0	7,267.0	11,877.4	7,267.0	76.2	72.4	90.00	3,897.8	-612.4	919.5	776.8	142.65	6.446	
11,700.0	7,267.0	11,977.4	7,267.0	77.9	74.1	90.00	3,997.8	-612.4	919.1	773.0	146.09	6.291	
11,800.0	7,267.0	12,077.4	7,267.0	79.5	75.8	90.00	4,097.8	-612.4	918.8	769.2	149.54	6.144	
11,900.0	7,267.0	12,177.4	7,267.0	81.1	77.5	90.00	4,197.8	-612.4	918.4	765.4	152.99	6.003	
12,000.0	7,267.0	12,277.4	7,267.0	82.7	79.2	90.00	4,297.8	-612.4	918.1	761.6	156.45	5.868	
12,100.0	7,267.0	12,377.4	7,267.0	84.4	80.9	90.00	4,397.8	-612.4	917.7	757.8	159.90	5.739	
12,200.0	7,267.0	12,477.4	7,267.0	86.0	82.6	90.00	4,497.8	-612.4	917.4	754.0	163.36	5.616	
12,300.0	7,267.0	12,577.4	7,267.0	87.6	84.3	90.00	4,597.8	-612.4	917.0	750.2	166.82	5.497	
12,400.0	7,267.0	12,677.4	7,267.0	89.3	86.0	90.00	4,697.8	-612.4	916.7	746.4	170.29	5.383	
12,500.0	7,267.0	12,777.4	7,267.0	90.9	87.8	90.00	4,797.8	-612.4	916.3	742.6	173.75	5.274	
12,600.0	7,267.0	12,877.4	7,267.0	92.6	89.5	90.00	4,897.8	-612.4	916.0	738.8	177.22	5.169	
12,700.0	7,267.0	12,977.4	7,267.0	94.3	91.2	90.00	4,997.8	-612.4	915.6	734.9	180.69	5.067	
12,800.0	7,267.0	13,077.4	7,267.0	95.9	92.9	90.00	5,097.8	-612.5	915.3	731.1	184.15	4.970	
12,900.0	7,267.0	13,177.4	7,267.0	97.6	94.6	90.00	5,197.8	-612.5	914.9	727.3	187.63	4.876	
13,000.0	7,267.0	13,277.4	7,267.0	99.3	96.4	90.00	5,297.8	-612.5	914.6	723.5	191.10	4.786	
13,100.0	7,267.0	13,377.4	7,267.0	100.9	98.1	90.00	5,397.8	-612.5	914.2	719.7	194.57	4.699	
13,200.0	7,267.0	13,477.4	7,267.0	102.6	99.8	90.00	5,497.8	-612.5	913.9	715.8	198.05	4.614	
13,300.0	7,267.0	13,577.4	7,267.0	104.3	101.5	90.00	5,597.8	-612.5	913.5	712.0	201.52	4.533	
13,400.0	7,267.0	13,677.4	7,267.0	106.0	103.3	90.00	5,697.8	-612.5	913.2	708.2	205.00	4.455	
13,500.0	7,267.0	13,777.4	7,267.0	107.6	105.0	90.00	5,797.8	-612.5	912.8	704.3	208.48	4.379	
13,600.0	7,267.0	13,877.4	7,267.0	109.3	106.7	90.00	5,897.8	-612.5	912.5	700.5	211.96	4.305	
13,700.0	7,267.0	13,977.4	7,267.0	111.0	108.4	90.00	5,997.8	-612.5	912.1	696.7	215.44	4.234	
13,800.0	7,267.0	14,077.4	7,267.0	112.7	110.2	90.00	6,097.8	-612.5	911.8	692.9	218.92	4.165	
13,900.0	7,267.0	14,177.4	7,267.0	114.4	111.9	90.00	6,197.8	-612.5	911.4	689.0	222.40	4.098	
14,000.0	7,267.0	14,277.4	7,267.0	116.1	113.6	90.00	6,297.8	-612.5	911.1	685.2	225.88	4.033	
14,100.0	7,267.0	14,377.4	7,267.0	117.8	115.4	90.00	6,397.8	-612.5	910.7	681.4	229.36	3.971	

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4E-17H-P267 - DD - 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
14,200.0	7,267.0	14,477.4	7,267.0	119.5	117.1	90.00	6,497.8	-612.5	910.4	677.5	232.85	3.910	
14,259.5	7,267.0	14,535.9	7,267.0	120.5	118.1	90.00	6,556.3	-612.5	910.2	675.3	234.91	3.875	
14,265.5	7,267.0	14,535.9	7,267.0	120.6	118.1	90.00	6,556.3	-612.5	910.2	675.2	235.01	3.873 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4F-17H-P267 - DD - Plan #3														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	90.41	-0.4	49.8	49.8						
100.0	100.0	100.0	100.0	0.1	0.1	90.41	-0.4	49.8	49.8	49.5	0.24	203.690			
200.0	200.0	200.0	200.0	0.3	0.3	90.41	-0.4	49.8	49.8	49.2	0.59	83.873 CC, ES			
300.0	300.0	300.0	300.0	0.5	0.5	-161.11	-0.4	49.8	51.4	50.5	0.94	54.553			
400.0	399.8	399.8	399.8	0.7	0.6	-162.80	-0.4	49.8	56.4	55.1	1.29	43.650			
500.0	499.5	500.0	500.0	0.9	0.8	-164.71	-0.8	49.6	64.6	62.9	1.64	39.317			
600.0	598.7	600.6	600.6	1.2	1.0	-164.76	-4.0	48.1	74.7	72.7	2.00	37.342			
700.0	697.5	701.2	700.9	1.5	1.2	-163.32	-10.4	45.2	86.5	84.1	2.38	36.363			
800.0	795.6	801.7	800.8	1.9	1.4	-160.99	-20.0	40.9	100.2	97.4	2.80	35.774			
884.5	878.0	886.3	884.6	2.2	1.7	-158.63	-30.6	36.1	113.3	110.1	3.21	35.335			
900.0	893.1	901.6	899.8	2.3	1.7	-158.21	-32.7	35.1	115.8	112.5	3.28	35.257			
1,000.0	990.2	1,000.1	997.1	2.7	2.0	-155.85	-46.5	28.9	132.3	128.4	3.81	34.690			
1,100.0	1,087.4	1,098.6	1,094.5	3.2	2.3	-154.02	-60.2	22.7	148.9	144.5	4.37	34.102			
1,200.0	1,184.5	1,197.2	1,191.8	3.6	2.6	-152.55	-74.0	16.5	165.7	160.7	4.94	33.549			
1,300.0	1,281.7	1,295.7	1,289.1	4.1	2.8	-151.35	-87.7	10.2	182.5	177.0	5.52	33.049			
1,400.0	1,378.9	1,394.2	1,386.5	4.5	3.2	-150.36	-101.5	4.0	199.4	193.3	6.12	32.604			
1,500.0	1,476.0	1,492.7	1,483.8	5.0	3.5	-149.52	-115.2	-2.2	216.4	209.6	6.72	32.211			
1,600.0	1,573.2	1,591.2	1,581.2	5.4	3.8	-148.81	-129.0	-8.4	233.3	226.0	7.32	31.864			
1,700.0	1,670.3	1,689.7	1,678.5	5.9	4.1	-148.19	-142.7	-14.7	250.4	242.4	7.93	31.557			
1,800.0	1,767.5	1,788.2	1,775.9	6.3	4.4	-147.65	-156.5	-20.9	267.4	258.9	8.55	31.283			
1,900.0	1,864.7	1,886.7	1,873.2	6.8	4.7	-147.17	-170.2	-27.1	284.5	275.3	9.17	31.040			
2,000.0	1,961.8	1,985.2	1,970.5	7.2	5.0	-146.75	-184.0	-33.3	301.6	291.8	9.78	30.821			
2,100.0	2,059.0	2,083.7	2,067.9	7.7	5.3	-146.37	-197.7	-39.6	318.7	308.3	10.41	30.625			
2,200.0	2,156.1	2,182.2	2,165.2	8.1	5.6	-146.04	-211.5	-45.8	335.8	324.8	11.03	30.447			
2,300.0	2,253.3	2,280.7	2,262.6	8.6	5.9	-145.73	-225.2	-52.0	352.9	341.3	11.65	30.286			
2,400.0	2,350.4	2,379.2	2,359.9	9.1	6.2	-145.45	-239.0	-58.2	370.0	357.8	12.28	30.139			
2,500.0	2,447.6	2,477.7	2,457.3	9.5	6.6	-145.20	-252.7	-64.5	387.2	374.3	12.90	30.005			
2,600.0	2,544.8	2,576.2	2,554.6	10.0	6.9	-144.97	-266.5	-70.7	404.3	390.8	13.53	29.882			
2,700.0	2,641.9	2,674.7	2,651.9	10.4	7.2	-144.76	-280.3	-76.9	421.5	407.3	14.16	29.769			
2,800.0	2,739.1	2,773.3	2,749.3	10.9	7.5	-144.56	-294.0	-83.1	438.6	423.9	14.79	29.664			
2,900.0	2,836.2	2,871.8	2,846.6	11.3	7.8	-144.38	-307.8	-89.4	455.8	440.4	15.42	29.567			
3,000.0	2,933.4	2,970.3	2,944.0	11.8	8.1	-144.21	-321.5	-95.6	473.0	456.9	16.05	29.477			
3,100.0	3,030.6	3,068.8	3,041.3	12.3	8.4	-144.06	-335.3	-101.8	490.1	473.5	16.67	29.394			
3,200.0	3,127.7	3,167.3	3,138.7	12.7	8.7	-143.91	-349.0	-108.0	507.3	490.0	17.31	29.316			
3,300.0	3,224.9	3,265.8	3,236.0	13.2	9.1	-143.78	-362.8	-114.3	524.5	506.6	17.94	29.243			
3,400.0	3,322.0	3,364.3	3,333.3	13.6	9.4	-143.65	-376.5	-120.5	541.7	523.1	18.57	29.175			
3,500.0	3,419.2	3,462.8	3,430.7	14.1	9.7	-143.53	-390.3	-126.7	558.8	539.6	19.20	29.110			
3,600.0	3,516.4	3,561.3	3,528.0	14.5	10.0	-143.42	-404.0	-132.9	576.0	556.2	19.83	29.050			
3,700.0	3,613.5	3,659.8	3,625.4	15.0	10.3	-143.31	-417.8	-139.2	593.2	572.8	20.46	28.993			
3,800.0	3,710.7	3,758.3	3,722.7	15.5	10.6	-143.21	-431.5	-145.4	610.4	589.3	21.09	28.940			
3,900.0	3,807.8	3,856.8	3,820.1	15.9	10.9	-143.12	-445.3	-151.6	627.6	605.9	21.72	28.889			
4,000.0	3,905.0	3,955.3	3,917.4	16.4	11.3	-143.03	-459.0	-157.8	644.8	622.4	22.36	28.841			
4,100.0	4,002.2	4,053.8	4,014.7	16.8	11.6	-142.94	-472.8	-164.1	662.0	639.0	22.99	28.796			
4,200.0	4,099.3	4,152.3	4,112.1	17.3	11.9	-142.86	-486.5	-170.3	679.2	655.5	23.62	28.753			
4,300.0	4,196.5	4,250.9	4,209.4	17.7	12.2	-142.78	-500.3	-176.5	696.4	672.1	24.25	28.712			
4,400.0	4,293.6	4,349.4	4,306.8	18.2	12.5	-142.71	-514.0	-182.7	713.6	688.7	24.89	28.673			
4,500.0	4,390.8	4,447.9	4,404.1	18.7	12.8	-142.64	-527.8	-189.0	730.8	705.2	25.52	28.636			
4,600.0	4,487.9	4,546.4	4,501.5	19.1	13.1	-142.58	-541.6	-195.2	747.9	721.8	26.15	28.600			
4,700.0	4,585.1	4,644.9	4,598.8	19.6	13.5	-142.51	-555.3	-201.4	765.1	738.4	26.78	28.566			
4,800.0	4,682.3	4,743.4	4,696.1	20.0	13.8	-142.45	-569.1	-207.6	782.3	754.9	27.42	28.534			
4,900.0	4,779.4	4,841.9	4,793.5	20.5	14.1	-142.39	-582.8	-213.9	799.5	771.5	28.05	28.503			
5,000.0	4,876.6	4,940.4	4,890.8	20.9	14.4	-142.34	-596.6	-220.1	816.7	788.1	28.68	28.473			

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													S17-T2N-R67W (Big Horn) - Bighorn 4F-17H-P267 - DD - Plan #3		Offset Site Error:		0.0 ft	
Survey Program:													0-Geolink MWD		Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor						
5,100.0	4,973.7	5,038.9	4,988.2	21.4	14.7	-142.29	-610.3	-226.3	833.9	804.6	29.32	28.445						
5,200.0	5,070.9	5,137.4	5,085.5	21.9	15.0	-142.24	-624.1	-232.5	851.2	821.2	29.95	28.418						
5,300.0	5,168.1	5,235.9	5,182.9	22.3	15.3	-142.19	-637.8	-238.8	868.4	837.8	30.58	28.392						
5,400.0	5,265.2	5,334.4	5,280.2	22.8	15.7	-142.14	-651.6	-245.0	885.6	854.3	31.22	28.366						
5,500.0	5,362.4	5,432.9	5,377.5	23.2	16.0	-142.09	-665.3	-251.2	902.8	870.9	31.85	28.342						
5,600.0	5,459.5	5,531.4	5,474.9	23.7	16.3	-142.05	-679.1	-257.4	920.0	887.5	32.49	28.319						
5,700.0	5,556.7	5,629.9	5,572.2	24.1	16.6	-142.01	-692.8	-263.7	937.2	904.1	33.12	28.297						
5,800.0	5,653.9	5,728.5	5,669.6	24.6	16.9	-141.97	-706.6	-269.9	954.4	920.6	33.75	28.275						
5,900.0	5,751.0	5,827.0	5,766.9	25.1	17.2	-141.93	-720.3	-276.1	971.6	937.2	34.39	28.254						
6,000.0	5,848.2	5,925.5	5,864.3	25.5	17.5	-141.89	-734.1	-282.3	988.8	953.8	35.02	28.234 SF						

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	90.35	-0.4	59.8	59.8					
100.0	100.0	100.0	100.0	0.1	0.1	90.35	-0.4	59.8	59.8	59.6	0.24	244.884		
200.0	200.0	200.0	200.0	0.3	0.3	90.35	-0.4	59.8	59.8	59.2	0.59	100.835 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-161.06	-0.4	59.8	61.5	60.5	0.94	65.232		
400.0	399.8	399.8	399.8	0.7	0.6	-162.50	-0.4	59.8	66.5	65.2	1.29	51.433		
500.0	499.5	499.5	499.5	0.9	0.8	-164.46	-0.4	59.8	74.8	73.2	1.64	45.580		
600.0	598.7	599.6	599.6	1.2	1.0	-165.48	-2.1	59.4	86.1	84.1	1.99	43.169		
700.0	697.5	699.7	699.5	1.5	1.2	-164.81	-7.1	58.2	99.6	97.3	2.36	42.209		
800.0	795.6	799.4	798.9	1.9	1.4	-163.07	-15.6	56.3	115.6	112.8	2.76	41.880		
884.5	878.0	883.4	882.2	2.2	1.6	-161.12	-25.3	54.0	131.0	127.8	3.14	41.722		
900.0	893.1	898.7	897.4	2.3	1.6	-160.74	-27.3	53.5	133.9	130.7	3.21	41.701		
1,000.0	990.2	997.0	994.6	2.7	1.9	-158.29	-41.4	50.2	153.1	149.4	3.72	41.170		
1,100.0	1,087.4	1,095.0	1,091.5	3.2	2.2	-156.34	-55.6	46.9	172.4	168.2	4.25	40.558		
1,200.0	1,184.5	1,192.9	1,188.4	3.6	2.4	-154.79	-69.8	43.5	191.9	187.1	4.80	39.959		
1,300.0	1,281.7	1,290.9	1,285.3	4.1	2.7	-153.52	-83.9	40.2	211.5	206.2	5.37	39.405		
1,400.0	1,378.9	1,388.8	1,382.1	4.5	3.0	-152.47	-98.1	36.9	231.2	225.3	5.94	38.905		
1,500.0	1,476.0	1,486.8	1,479.0	5.0	3.3	-151.58	-112.3	33.5	251.0	244.4	6.53	38.459		
1,600.0	1,573.2	1,584.8	1,575.9	5.4	3.6	-150.83	-126.5	30.2	270.8	263.7	7.11	38.062		
1,700.0	1,670.3	1,682.7	1,672.7	5.9	3.9	-150.17	-140.6	26.9	290.6	282.9	7.71	37.709		
1,800.0	1,767.5	1,780.7	1,769.6	6.3	4.2	-149.60	-154.8	23.5	310.5	302.2	8.30	37.395		
1,900.0	1,864.7	1,878.6	1,866.5	6.8	4.5	-149.10	-169.0	20.2	330.4	321.5	8.90	37.113		
2,000.0	1,961.8	1,976.6	1,963.4	7.2	4.8	-148.65	-183.1	16.9	350.3	340.8	9.50	36.861		
2,100.0	2,059.0	2,074.6	2,060.2	7.7	5.1	-148.26	-197.3	13.6	370.2	360.1	10.11	36.633		
2,200.0	2,156.1	2,172.5	2,157.1	8.1	5.4	-147.90	-211.5	10.2	390.2	379.5	10.71	36.427		
2,300.0	2,253.3	2,270.5	2,254.0	8.6	5.7	-147.58	-225.7	6.9	410.2	398.8	11.32	36.240		
2,400.0	2,350.4	2,368.5	2,350.9	9.1	6.0	-147.29	-239.8	3.6	430.1	418.2	11.93	36.070		
2,500.0	2,447.6	2,466.4	2,447.7	9.5	6.3	-147.02	-254.0	0.2	450.1	437.6	12.53	35.914		
2,600.0	2,544.8	2,564.4	2,544.6	10.0	6.6	-146.78	-268.2	-3.1	470.1	457.0	13.14	35.770		
2,700.0	2,641.9	2,662.3	2,641.5	10.4	6.9	-146.55	-282.4	-6.4	490.1	476.4	13.75	35.639		
2,800.0	2,739.1	2,760.3	2,738.4	10.9	7.2	-146.35	-296.5	-9.8	510.1	495.8	14.36	35.517		
2,900.0	2,836.2	2,858.3	2,835.2	11.3	7.5	-146.16	-310.7	-13.1	530.2	515.2	14.97	35.404		
3,000.0	2,933.4	2,956.2	2,932.1	11.8	7.8	-145.98	-324.9	-16.4	550.2	534.6	15.59	35.299		
3,100.0	3,030.6	3,054.2	3,029.0	12.3	8.1	-145.82	-339.0	-19.8	570.2	554.0	16.20	35.202		
3,200.0	3,127.7	3,152.1	3,125.9	12.7	8.4	-145.66	-353.2	-23.1	590.2	573.4	16.81	35.111		
3,300.0	3,224.9	3,250.1	3,222.7	13.2	8.8	-145.52	-367.4	-26.4	610.3	592.8	17.42	35.026		
3,400.0	3,322.0	3,348.1	3,319.6	13.6	9.1	-145.39	-381.6	-29.7	630.3	612.3	18.04	34.947		
3,500.0	3,419.2	3,446.0	3,416.5	14.1	9.4	-145.26	-395.7	-33.1	650.3	631.7	18.65	34.872		
3,600.0	3,516.4	3,544.0	3,513.4	14.5	9.7	-145.14	-409.9	-36.4	670.4	651.1	19.26	34.802		
3,700.0	3,613.5	3,642.0	3,610.2	15.0	10.0	-145.03	-424.1	-39.7	690.4	670.6	19.88	34.735		
3,800.0	3,710.7	3,739.9	3,707.1	15.5	10.3	-144.93	-438.2	-43.1	710.5	690.0	20.49	34.673		
3,900.0	3,807.8	3,837.9	3,804.0	15.9	10.6	-144.83	-452.4	-46.4	730.5	709.4	21.11	34.614		
4,000.0	3,905.0	3,935.8	3,900.8	16.4	10.9	-144.73	-466.6	-49.7	750.6	728.9	21.72	34.558		
4,100.0	4,002.2	4,033.8	3,997.7	16.8	11.2	-144.64	-480.8	-53.1	770.6	748.3	22.33	34.505		
4,200.0	4,099.3	4,131.8	4,094.6	17.3	11.5	-144.56	-494.9	-56.4	790.7	767.7	22.95	34.455		
4,300.0	4,196.5	4,229.7	4,191.5	17.7	11.8	-144.48	-509.1	-59.7	810.7	787.2	23.56	34.407		
4,400.0	4,293.6	4,327.7	4,288.3	18.2	12.1	-144.40	-523.3	-63.1	830.8	806.6	24.18	34.362		
4,500.0	4,390.8	4,425.6	4,385.2	18.7	12.4	-144.33	-537.5	-66.4	850.9	826.1	24.79	34.318		
4,600.0	4,487.9	4,523.6	4,482.1	19.1	12.7	-144.26	-551.6	-69.7	870.9	845.5	25.41	34.277		
4,700.0	4,585.1	4,621.6	4,579.0	19.6	13.0	-144.19	-565.8	-73.0	891.0	865.0	26.02	34.237		
4,800.0	4,682.3	4,719.5	4,675.8	20.0	13.3	-144.13	-580.0	-76.4	911.1	884.4	26.64	34.200		
4,900.0	4,779.4	4,817.5	4,772.7	20.5	13.6	-144.07	-594.1	-79.7	931.1	903.9	27.25	34.164		
5,000.0	4,876.6	4,915.5	4,869.6	20.9	13.9	-144.01	-608.3	-83.0	951.2	923.3	27.87	34.129		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #2													Offset Site Error: 0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	4,973.7	5,013.4	4,966.5	21.4	14.2	-143.96	-622.5	-86.4	971.2	942.8	28.49	34.096	
5,200.0	5,070.9	5,111.4	5,063.3	21.9	14.6	-143.90	-636.7	-89.7	991.3	962.2	29.10	34.064 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-17H-P267 - DD - Plan #2													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	90.31	-0.4	69.9	69.9					
100.0	100.0	100.0	100.0	0.1	0.1	90.31	-0.4	69.9	69.9	69.7	0.24	286.078		
200.0	200.0	200.0	200.0	0.3	0.3	90.31	-0.4	69.9	69.9	69.3	0.59	117.797 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-161.03	-0.4	69.9	71.6	70.6	0.94	75.911		
400.0	399.8	399.8	399.8	0.7	0.6	-162.27	-0.4	69.9	76.5	75.2	1.29	59.217		
500.0	499.5	499.5	499.5	0.9	0.8	-163.73	-0.8	69.9	84.8	83.2	1.64	51.658		
600.0	598.7	599.1	599.0	1.2	1.0	-163.64	-4.3	69.9	96.3	94.3	2.00	48.167		
700.0	697.5	698.1	697.8	1.5	1.2	-162.26	-11.1	69.8	111.0	108.6	2.38	46.607		
800.0	795.6	796.5	795.6	1.9	1.4	-160.13	-21.3	69.7	128.9	126.1	2.80	45.954		
884.5	878.0	879.0	877.4	2.2	1.6	-158.11	-32.3	69.6	146.7	143.5	3.20	45.840		
900.0	893.1	894.0	892.3	2.3	1.7	-157.81	-34.3	69.6	150.1	146.9	3.28	45.844		
1,000.0	990.2	991.4	988.7	2.7	1.9	-156.19	-47.8	69.5	172.7	168.9	3.78	45.708		
1,100.0	1,087.4	1,088.7	1,085.1	3.2	2.2	-154.94	-61.2	69.4	195.3	191.0	4.30	45.453		
1,200.0	1,184.5	1,186.0	1,181.5	3.6	2.5	-153.95	-74.7	69.3	218.1	213.2	4.83	45.158		
1,300.0	1,281.7	1,283.3	1,277.9	4.1	2.7	-153.15	-88.1	69.2	240.8	235.5	5.37	44.861		
1,400.0	1,378.9	1,380.7	1,374.3	4.5	3.0	-152.48	-101.6	69.1	263.6	257.7	5.91	44.576		
1,500.0	1,476.0	1,478.0	1,470.7	5.0	3.3	-151.92	-115.0	69.0	286.5	280.0	6.47	44.312		
1,600.0	1,573.2	1,575.3	1,567.1	5.4	3.6	-151.45	-128.5	68.9	309.3	302.3	7.02	44.069		
1,700.0	1,670.3	1,672.6	1,663.4	5.9	3.9	-151.04	-141.9	68.8	332.2	324.6	7.58	43.847		
1,800.0	1,767.5	1,769.9	1,759.8	6.3	4.1	-150.68	-155.3	68.7	355.1	347.0	8.14	43.645		
1,900.0	1,864.7	1,867.3	1,856.2	6.8	4.4	-150.37	-168.8	68.6	378.0	369.3	8.70	43.460		
2,000.0	1,961.8	1,964.6	1,952.6	7.2	4.7	-150.09	-182.2	68.5	400.9	391.7	9.26	43.292		
2,100.0	2,059.0	2,061.9	2,049.0	7.7	5.0	-149.84	-195.7	68.4	423.8	414.0	9.83	43.138		
2,200.0	2,156.1	2,159.2	2,145.4	8.1	5.3	-149.62	-209.1	68.3	446.8	436.4	10.39	42.997		
2,300.0	2,253.3	2,256.6	2,241.8	8.6	5.6	-149.42	-222.6	68.1	469.7	458.7	10.96	42.868		
2,400.0	2,350.4	2,353.9	2,338.2	9.1	5.9	-149.23	-236.0	68.0	492.6	481.1	11.52	42.749		
2,500.0	2,447.6	2,451.2	2,434.6	9.5	6.1	-149.07	-249.5	67.9	515.6	503.5	12.09	42.639		
2,600.0	2,544.8	2,548.5	2,530.9	10.0	6.4	-148.92	-262.9	67.8	538.5	525.9	12.66	42.537		
2,700.0	2,641.9	2,645.9	2,627.3	10.4	6.7	-148.78	-276.3	67.7	561.5	548.2	13.23	42.442		
2,800.0	2,739.1	2,743.2	2,723.7	10.9	7.0	-148.65	-289.8	67.6	584.4	570.6	13.80	42.355		
2,900.0	2,836.2	2,840.5	2,820.1	11.3	7.3	-148.53	-303.2	67.5	607.4	593.0	14.37	42.273		
3,000.0	2,933.4	2,937.8	2,916.5	11.8	7.6	-148.42	-316.7	67.4	630.3	615.4	14.94	42.196		
3,100.0	3,030.6	3,035.1	3,012.9	12.3	7.9	-148.32	-330.1	67.3	653.3	637.8	15.51	42.125		
3,200.0	3,127.7	3,132.5	3,109.3	12.7	8.2	-148.22	-343.6	67.2	676.3	660.2	16.08	42.057		
3,300.0	3,224.9	3,229.8	3,205.7	13.2	8.4	-148.13	-357.0	67.1	699.2	682.6	16.65	41.994		
3,400.0	3,322.0	3,327.1	3,302.1	13.6	8.7	-148.05	-370.5	67.0	722.2	705.0	17.22	41.935		
3,500.0	3,419.2	3,424.4	3,398.4	14.1	9.0	-147.97	-383.9	66.9	745.1	727.3	17.79	41.879		
3,600.0	3,516.4	3,521.8	3,494.8	14.5	9.3	-147.90	-397.3	66.8	768.1	749.7	18.36	41.826		
3,700.0	3,613.5	3,619.1	3,591.2	15.0	9.6	-147.83	-410.8	66.7	791.1	772.1	18.94	41.776		
3,800.0	3,710.7	3,716.4	3,687.6	15.5	9.9	-147.76	-424.2	66.6	814.0	794.5	19.51	41.729		
3,900.0	3,807.8	3,813.7	3,784.0	15.9	10.2	-147.70	-437.7	66.4	837.0	816.9	20.08	41.684		
4,000.0	3,905.0	3,911.0	3,880.4	16.4	10.5	-147.64	-451.1	66.3	860.0	839.3	20.65	41.642		
4,100.0	4,002.2	4,008.4	3,976.8	16.8	10.8	-147.59	-464.6	66.2	883.0	861.7	21.22	41.601		
4,200.0	4,099.3	4,105.7	4,073.2	17.3	11.0	-147.53	-478.0	66.1	905.9	884.1	21.80	41.563		
4,300.0	4,196.5	4,203.0	4,169.6	17.7	11.3	-147.48	-491.5	66.0	928.9	906.5	22.37	41.526		
4,400.0	4,293.6	4,300.3	4,266.0	18.2	11.6	-147.44	-504.9	65.9	951.9	928.9	22.94	41.491		
4,500.0	4,390.8	4,397.7	4,362.3	18.7	11.9	-147.39	-518.3	65.8	974.8	951.3	23.51	41.457		
4,600.0	4,487.9	4,495.0	4,458.7	19.1	12.2	-147.35	-531.8	65.7	997.8	973.7	24.09	41.425 SF		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4I-17H-P267 - DD - Plan #4													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	90.28	-0.4	80.0	80.0					
100.0	100.0	100.0	100.0	0.1	0.1	90.28	-0.4	80.0	80.0	79.7	0.24	327.273		
200.0	200.0	200.0	200.0	0.3	0.3	90.28	-0.4	80.0	80.0	79.4	0.59	134.760 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-161.00	-0.4	80.0	81.6	80.7	0.94	86.590		
400.0	399.8	399.8	399.8	0.7	0.6	-162.10	-0.4	80.0	86.6	85.3	1.29	67.002		
500.0	499.5	499.5	499.5	0.9	0.8	-163.15	-1.2	80.0	94.9	93.2	1.64	57.750		
600.0	598.7	598.9	598.8	1.2	1.0	-163.58	-3.8	80.0	106.5	104.5	2.00	53.295		
700.0	697.5	697.8	697.7	1.5	1.2	-163.55	-8.1	80.1	121.4	119.0	2.36	51.379		
800.0	795.6	796.2	795.9	1.9	1.4	-163.18	-14.1	80.2	139.5	136.8	2.74	50.903		
884.5	878.0	878.9	878.3	2.2	1.5	-162.71	-20.4	80.3	157.3	154.3	3.08	51.156		
900.0	893.1	894.0	893.4	2.3	1.6	-162.63	-21.7	80.3	160.8	157.7	3.14	51.229		
1,000.0	990.2	991.4	990.4	2.7	1.8	-161.88	-30.9	80.5	183.3	179.7	3.57	51.334		
1,100.0	1,087.4	1,088.8	1,087.1	3.2	2.0	-160.82	-41.7	80.7	205.8	201.8	4.03	51.044		
1,200.0	1,184.5	1,186.0	1,183.6	3.6	2.3	-159.55	-54.2	80.9	228.4	223.9	4.53	50.455		
1,300.0	1,281.7	1,283.0	1,279.6	4.1	2.6	-158.12	-68.3	81.2	251.2	246.1	5.06	49.670		
1,400.0	1,378.9	1,380.2	1,375.5	4.5	2.8	-156.73	-83.3	81.4	274.1	268.5	5.61	48.874		
1,500.0	1,476.0	1,477.3	1,471.5	5.0	3.1	-155.55	-98.3	81.7	297.2	291.0	6.17	48.161		
1,600.0	1,573.2	1,574.4	1,567.4	5.4	3.4	-154.55	-113.4	81.9	320.4	313.7	6.74	47.525		
1,700.0	1,670.3	1,671.5	1,663.4	5.9	3.7	-153.67	-128.4	82.2	343.7	336.4	7.32	46.960		
1,800.0	1,767.5	1,768.7	1,759.3	6.3	4.0	-152.91	-143.4	82.5	367.0	359.1	7.90	46.458		
1,900.0	1,864.7	1,861.2	1,850.7	6.8	4.3	-152.29	-157.6	83.1	390.9	382.4	8.47	46.176		
2,000.0	1,961.8	1,951.8	1,940.3	7.2	4.6	-151.82	-171.3	85.2	416.2	407.2	9.02	46.161 SF		
2,100.0	2,059.0	2,041.8	2,029.2	7.7	4.9	-151.46	-184.6	88.6	443.0	433.4	9.56	46.351		
2,200.0	2,156.1	2,133.8	2,120.1	8.1	5.1	-151.19	-198.0	93.5	471.1	461.0	10.10	46.653		
2,300.0	2,253.3	2,229.6	2,214.8	8.6	5.4	-150.95	-211.9	98.7	499.4	488.8	10.65	46.899		
2,400.0	2,350.4	2,325.5	2,309.5	9.1	5.7	-150.73	-225.8	104.0	527.8	516.6	11.20	47.121		
2,500.0	2,447.6	2,421.4	2,404.2	9.5	6.0	-150.54	-239.7	109.3	556.1	544.4	11.75	47.321		
2,600.0	2,544.8	2,517.3	2,499.0	10.0	6.3	-150.36	-253.6	114.6	584.5	572.2	12.30	47.503		
2,700.0	2,641.9	2,613.1	2,593.7	10.4	6.6	-150.20	-267.5	119.8	612.9	600.0	12.86	47.669		
2,800.0	2,739.1	2,709.0	2,688.4	10.9	6.9	-150.06	-281.4	125.1	641.2	627.8	13.41	47.822		
2,900.0	2,836.2	2,804.9	2,783.1	11.3	7.2	-149.93	-295.3	130.4	669.6	655.7	13.96	47.962		
3,000.0	2,933.4	2,900.8	2,877.8	11.8	7.5	-149.81	-309.2	135.6	698.0	683.5	14.51	48.091		
3,100.0	3,030.6	2,996.7	2,972.5	12.3	7.8	-149.69	-323.1	140.9	726.4	711.3	15.07	48.211		
3,200.0	3,127.7	3,092.5	3,067.3	12.7	8.1	-149.59	-337.0	146.2	754.8	739.2	15.62	48.322		
3,300.0	3,224.9	3,188.4	3,162.0	13.2	8.4	-149.49	-350.9	151.5	783.2	767.0	16.17	48.425		
3,400.0	3,322.0	3,284.3	3,256.7	13.6	8.7	-149.41	-364.8	156.7	811.6	794.8	16.73	48.522		
3,500.0	3,419.2	3,380.2	3,351.4	14.1	9.0	-149.32	-378.7	162.0	840.0	822.7	17.28	48.612		
3,600.0	3,516.4	3,476.0	3,446.1	14.5	9.3	-149.24	-392.7	167.3	868.3	850.5	17.83	48.697		
3,700.0	3,613.5	3,571.9	3,540.9	15.0	9.6	-149.17	-406.6	172.5	896.7	878.4	18.38	48.776		
3,800.0	3,710.7	3,667.8	3,635.6	15.5	10.0	-149.10	-420.5	177.8	925.1	906.2	18.94	48.851		
3,900.0	3,807.8	3,763.7	3,730.3	15.9	10.3	-149.04	-434.4	183.1	953.5	934.0	19.49	48.922		
4,000.0	3,905.0	3,859.6	3,825.0	16.4	10.6	-148.98	-448.3	188.4	981.9	961.9	20.04	48.988		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4J-17H-P267 - DD - Plan #3													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	90.24	-0.4	90.0	90.0					
100.0	100.0	100.0	100.0	0.1	0.1	90.24	-0.4	90.0	90.0	89.8	0.24	368.467		
200.0	200.0	200.0	200.0	0.3	0.3	90.24	-0.4	90.0	90.0	89.4	0.59	151.722 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-160.99	-0.4	90.0	91.7	90.7	0.94	97.269		
400.0	399.8	398.2	398.2	0.7	0.6	-161.94	-0.4	90.4	97.1	95.8	1.29	75.279		
500.0	499.5	494.1	494.0	0.9	0.8	-163.21	-0.4	93.7	108.7	107.1	1.63	66.588		
600.0	598.7	591.6	591.4	1.2	1.0	-164.57	-0.5	99.2	126.1	124.1	1.98	63.711		
700.0	697.5	689.4	689.0	1.5	1.2	-165.92	-0.5	104.9	146.9	144.6	2.32	63.206 SF		
800.0	795.6	786.3	785.8	1.9	1.4	-167.17	-0.5	110.5	171.1	168.4	2.67	64.182		
884.5	878.0	867.6	866.9	2.2	1.5	-168.13	-0.6	115.2	194.2	191.2	2.95	65.799		
900.0	893.1	882.4	881.7	2.3	1.6	-168.31	-0.6	116.0	198.6	195.6	3.00	66.104		
1,000.0	990.2	978.1	977.2	2.7	1.8	-169.30	-0.6	121.6	227.4	224.0	3.35	67.862		
1,100.0	1,087.4	1,073.8	1,072.8	3.2	1.9	-170.08	-0.7	127.1	256.2	252.5	3.70	69.323		
1,200.0	1,184.5	1,169.5	1,168.3	3.6	2.1	-170.70	-0.7	132.7	285.1	281.0	4.04	70.555		
1,300.0	1,281.7	1,265.2	1,263.9	4.1	2.3	-171.20	-0.8	138.2	313.9	309.6	4.38	71.607		
1,400.0	1,378.9	1,360.9	1,359.4	4.5	2.5	-171.62	-0.8	143.7	342.8	338.1	4.73	72.516		
1,500.0	1,476.0	1,456.6	1,455.0	5.0	2.7	-171.97	-0.8	149.3	371.8	366.7	5.07	73.308		
1,600.0	1,573.2	1,552.3	1,550.5	5.4	2.9	-172.28	-0.9	154.8	400.7	395.3	5.41	74.005		
1,700.0	1,670.3	1,648.0	1,646.1	5.9	3.1	-172.54	-0.9	160.3	429.6	423.9	5.76	74.622		
1,800.0	1,767.5	1,743.8	1,741.6	6.3	3.3	-172.77	-1.0	165.9	458.6	452.5	6.10	75.173		
1,900.0	1,864.7	1,839.5	1,837.1	6.8	3.5	-172.97	-1.0	171.4	487.5	481.1	6.44	75.667		
2,000.0	1,961.8	1,935.2	1,932.7	7.2	3.7	-173.15	-1.1	177.0	516.5	509.7	6.79	76.112		
2,100.0	2,059.0	2,030.9	2,028.2	7.7	3.9	-173.31	-1.1	182.5	545.4	538.3	7.13	76.516		
2,200.0	2,156.1	2,126.6	2,123.8	8.1	4.1	-173.45	-1.2	188.0	574.4	566.9	7.47	76.884		
2,300.0	2,253.3	2,222.3	2,219.3	8.6	4.2	-173.58	-1.2	193.6	603.3	595.5	7.81	77.220		
2,400.0	2,350.4	2,318.0	2,314.9	9.1	4.4	-173.70	-1.2	199.1	632.3	624.1	8.16	77.529		
2,500.0	2,447.6	2,413.7	2,410.4	9.5	4.6	-173.81	-1.3	204.7	661.3	652.8	8.50	77.814		
2,600.0	2,544.8	2,509.4	2,506.0	10.0	4.8	-173.91	-1.3	210.2	690.2	681.4	8.84	78.076		
2,700.0	2,641.9	2,605.1	2,601.5	10.4	5.0	-174.00	-1.4	215.7	719.2	710.0	9.18	78.320		
2,800.0	2,739.1	2,700.8	2,697.1	10.9	5.2	-174.08	-1.4	221.3	748.2	738.6	9.53	78.546		
2,900.0	2,836.2	2,796.5	2,792.6	11.3	5.4	-174.16	-1.5	226.8	777.1	767.3	9.87	78.757		
3,000.0	2,933.4	2,892.2	2,888.1	11.8	5.6	-174.23	-1.5	232.3	806.1	795.9	10.21	78.954		
3,100.0	3,030.6	2,987.9	2,983.7	12.3	5.8	-174.30	-1.5	237.9	835.1	824.5	10.55	79.139		
3,200.0	3,127.7	3,083.6	3,079.2	12.7	6.0	-174.36	-1.6	243.4	864.1	853.2	10.89	79.311		
3,300.0	3,224.9	3,179.3	3,174.8	13.2	6.2	-174.42	-1.6	249.0	893.1	881.8	11.24	79.474		
3,400.0	3,322.0	3,275.0	3,270.3	13.6	6.4	-174.48	-1.7	254.5	922.0	910.5	11.58	79.627		
3,500.0	3,419.2	3,370.7	3,365.9	14.1	6.6	-174.53	-1.7	260.0	951.0	939.1	11.92	79.771		
3,600.0	3,516.4	3,466.5	3,461.4	14.5	6.8	-174.58	-1.8	265.6	980.0	967.7	12.26	79.908		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4K-17H-P267 - DD - Plan #2													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	90.42	-0.7	99.8	99.8					
100.0	100.0	100.0	100.0	0.1	0.1	90.42	-0.7	99.8	99.8	99.6	0.24	408.525		
200.0	200.0	200.0	200.0	0.3	0.3	90.42	-0.7	99.8	99.8	99.2	0.59	168.216 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-160.79	-0.7	99.8	101.5	100.5	0.94	107.650		
400.0	399.8	396.2	396.2	0.7	0.6	-161.63	-0.7	101.4	108.1	106.8	1.29	84.060		
500.0	499.5	491.5	491.3	0.9	0.8	-162.76	-0.7	106.2	121.4	119.8	1.63	74.547		
600.0	598.7	586.1	585.6	1.2	1.0	-163.95	-0.7	114.0	141.2	139.3	1.97	71.699		
700.0	697.5	683.1	682.2	1.5	1.2	-165.13	-0.8	123.0	165.4	163.1	2.31	71.475 SF		
800.0	795.6	779.1	777.8	1.9	1.5	-166.23	-0.8	131.9	192.9	190.3	2.66	72.644		
884.5	878.0	859.5	857.9	2.2	1.6	-167.07	-0.8	139.4	218.8	215.8	2.94	74.378		
900.0	893.1	874.2	872.5	2.3	1.7	-167.24	-0.8	140.8	223.7	220.7	3.00	74.696		
1,000.0	990.2	968.8	966.7	2.7	1.9	-168.16	-0.8	149.5	255.7	252.4	3.34	76.523		
1,100.0	1,087.4	1,063.5	1,061.0	3.2	2.1	-168.87	-0.8	158.3	287.8	284.1	3.69	78.036		
1,200.0	1,184.5	1,158.2	1,155.2	3.6	2.3	-169.45	-0.8	167.1	319.9	315.9	4.03	79.309		
1,300.0	1,281.7	1,252.8	1,249.5	4.1	2.6	-169.91	-0.8	175.9	352.0	347.6	4.38	80.394		
1,400.0	1,378.9	1,347.5	1,343.8	4.5	2.8	-170.30	-0.8	184.7	384.1	379.4	4.72	81.330		
1,500.0	1,476.0	1,442.2	1,438.0	5.0	3.0	-170.63	-0.8	193.4	416.3	411.2	5.07	82.145		
1,600.0	1,573.2	1,536.8	1,532.3	5.4	3.2	-170.92	-0.9	202.2	448.5	443.0	5.41	82.860		
1,700.0	1,670.3	1,631.5	1,626.5	5.9	3.5	-171.16	-0.9	211.0	480.6	474.9	5.76	83.494		
1,800.0	1,767.5	1,726.2	1,720.8	6.3	3.7	-171.38	-0.9	219.8	512.8	506.7	6.10	84.059		
1,900.0	1,864.7	1,820.8	1,815.0	6.8	3.9	-171.56	-0.9	228.6	545.0	538.5	6.44	84.565		
2,000.0	1,961.8	1,915.5	1,909.3	7.2	4.1	-171.73	-0.9	237.4	577.2	570.4	6.79	85.022		
2,100.0	2,059.0	2,010.2	2,003.6	7.7	4.3	-171.88	-0.9	246.1	609.4	602.2	7.13	85.436		
2,200.0	2,156.1	2,104.8	2,097.8	8.1	4.6	-172.02	-0.9	254.9	641.6	634.1	7.48	85.812		
2,300.0	2,253.3	2,199.5	2,192.1	8.6	4.8	-172.14	-0.9	263.7	673.7	665.9	7.82	86.157		
2,400.0	2,350.4	2,294.2	2,286.3	9.1	5.0	-172.25	-0.9	272.5	705.9	697.8	8.16	86.472		
2,500.0	2,447.6	2,388.8	2,380.6	9.5	5.2	-172.35	-0.9	281.3	738.1	729.6	8.51	86.763		
2,600.0	2,544.8	2,483.5	2,474.8	10.0	5.5	-172.44	-1.0	290.1	770.3	761.5	8.85	87.032		
2,700.0	2,641.9	2,578.2	2,569.1	10.4	5.7	-172.53	-1.0	298.8	802.6	793.4	9.20	87.281		
2,800.0	2,739.1	2,672.8	2,663.4	10.9	5.9	-172.61	-1.0	307.6	834.8	825.2	9.54	87.513		
2,900.0	2,836.2	2,767.5	2,757.6	11.3	6.1	-172.68	-1.0	316.4	867.0	857.1	9.88	87.728		
3,000.0	2,933.4	2,862.2	2,851.9	11.8	6.4	-172.75	-1.0	325.2	899.2	888.9	10.23	87.929		
3,100.0	3,030.6	2,956.8	2,946.1	12.3	6.6	-172.81	-1.0	334.0	931.4	920.8	10.57	88.118		
3,200.0	3,127.7	3,051.5	3,040.4	12.7	6.8	-172.87	-1.0	342.8	963.6	952.7	10.91	88.294		
3,300.0	3,224.9	3,146.2	3,134.7	13.2	7.1	-172.93	-1.0	351.5	995.8	984.5	11.26	88.460		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4L-17H-P267 - DD - Plan #3													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	90.38	-0.7	109.9	109.9					
100.0	100.0	100.0	100.0	0.1	0.1	90.38	-0.7	109.9	109.9	109.6	0.24	449.719		
200.0	200.0	200.0	200.0	0.3	0.3	90.38	-0.7	109.9	109.9	109.3	0.59	185.179 CC, ES		
300.0	300.0	296.2	296.2	0.5	0.5	-160.76	-0.7	111.5	113.2	112.3	0.94	120.960		
400.0	399.8	391.7	391.6	0.7	0.7	-161.47	-0.8	116.3	123.2	121.9	1.28	96.387		
500.0	499.5	486.0	485.5	0.9	0.9	-162.41	-0.8	124.1	139.7	138.1	1.62	86.345		
600.0	598.7	579.8	578.7	1.2	1.1	-163.40	-0.8	134.9	162.7	160.7	1.96	83.083		
700.0	697.5	676.0	674.2	1.5	1.4	-164.40	-0.9	146.8	189.8	187.5	2.30	82.447 SF		
800.0	795.6	771.2	768.6	1.9	1.6	-165.35	-0.9	158.5	220.2	217.5	2.64	83.292		
884.5	878.0	850.8	847.6	2.2	1.8	-166.09	-0.9	168.3	248.4	245.5	2.93	84.797		
900.0	893.1	865.3	862.0	2.3	1.9	-166.24	-1.0	170.1	253.8	250.8	2.98	85.069		
1,000.0	990.2	958.9	955.0	2.7	2.1	-167.10	-1.0	181.6	288.6	285.3	3.33	86.633		
1,100.0	1,087.4	1,052.6	1,047.9	3.2	2.4	-167.77	-1.0	193.1	323.4	319.8	3.68	87.928		
1,200.0	1,184.5	1,146.3	1,140.9	3.6	2.6	-168.31	-1.1	204.7	358.3	354.3	4.03	89.019		
1,300.0	1,281.7	1,239.9	1,233.8	4.1	2.9	-168.75	-1.1	216.2	393.2	388.9	4.37	89.949		
1,400.0	1,378.9	1,333.6	1,326.8	4.5	3.1	-169.13	-1.2	227.7	428.2	423.4	4.72	90.752		
1,500.0	1,476.0	1,427.3	1,419.7	5.0	3.4	-169.44	-1.2	239.3	463.1	458.0	5.06	91.452		
1,600.0	1,573.2	1,521.0	1,512.7	5.4	3.7	-169.71	-1.2	250.8	498.1	492.6	5.41	92.067		
1,700.0	1,670.3	1,614.6	1,605.6	5.9	3.9	-169.95	-1.3	262.3	533.0	527.3	5.76	92.611		
1,800.0	1,767.5	1,708.3	1,698.6	6.3	4.2	-170.16	-1.3	273.9	568.0	561.9	6.10	93.097		
1,900.0	1,864.7	1,802.0	1,791.6	6.8	4.4	-170.34	-1.4	285.4	603.0	596.5	6.45	93.533		
2,000.0	1,961.8	1,895.6	1,884.5	7.2	4.7	-170.50	-1.4	297.0	637.9	631.1	6.79	93.926		
2,100.0	2,059.0	1,989.3	1,977.5	7.7	5.0	-170.65	-1.5	308.5	672.9	665.8	7.14	94.282		
2,200.0	2,156.1	2,083.0	2,070.4	8.1	5.2	-170.78	-1.5	320.0	707.9	700.4	7.48	94.606		
2,300.0	2,253.3	2,176.6	2,163.4	8.6	5.5	-170.90	-1.5	331.6	742.9	735.1	7.83	94.903		
2,400.0	2,350.4	2,270.3	2,256.3	9.1	5.7	-171.01	-1.6	343.1	777.9	769.7	8.17	95.175		
2,500.0	2,447.6	2,364.0	2,349.3	9.5	6.0	-171.11	-1.6	354.6	812.9	804.4	8.52	95.426		
2,600.0	2,544.8	2,457.6	2,442.2	10.0	6.3	-171.20	-1.7	366.2	847.9	839.0	8.86	95.657		
2,700.0	2,641.9	2,551.3	2,535.2	10.4	6.5	-171.28	-1.7	377.7	882.9	873.7	9.21	95.872		
2,800.0	2,739.1	2,645.0	2,628.2	10.9	6.8	-171.36	-1.7	389.2	917.9	908.3	9.55	96.071		
2,900.0	2,836.2	2,738.6	2,721.1	11.3	7.0	-171.43	-1.8	400.8	952.9	943.0	9.90	96.257		
3,000.0	2,933.4	2,832.3	2,814.1	11.8	7.3	-171.50	-1.8	412.3	987.9	977.6	10.24	96.431		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 33-8 (EXISTING) - ENCANA WELL - GYRO													Offset Site Error: 0.0 ft	
Survey Program: 100-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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
13,200.0	7,267.0	7,209.3	7,207.6	102.6	12.7	86.91	6,363.3	-1,257.0	906.5	795.2	111.36	8.140		
13,300.0	7,267.0	7,211.1	7,209.4	104.3	12.7	87.29	6,363.3	-1,257.0	811.5	698.4	113.14	7.172		
13,400.0	7,267.0	7,212.9	7,211.2	106.0	12.7	87.68	6,363.4	-1,257.0	717.8	602.9	114.91	6.246		
13,500.0	7,267.0	7,214.7	7,213.0	107.6	12.7	88.07	6,363.4	-1,257.1	626.0	509.3	116.69	5.365		
13,600.0	7,267.0	7,216.6	7,214.9	109.3	12.7	88.47	6,363.4	-1,257.1	537.2	418.8	118.45	4.535		
13,700.0	7,267.0	7,218.4	7,216.7	111.0	12.7	88.87	6,363.5	-1,257.1	453.1	332.9	120.22	3.769		
13,800.0	7,267.0	7,220.3	7,218.6	112.7	12.7	89.27	6,363.5	-1,257.1	376.8	254.8	121.98	3.089		
13,900.0	7,267.0	7,222.1	7,220.5	114.4	12.7	89.67	6,363.5	-1,257.1	314.1	190.3	123.73	2.538		
14,000.0	7,267.0	7,224.0	7,222.4	116.1	12.7	90.08	6,363.6	-1,257.1	274.4	148.9	125.48	2.187		
14,066.7	7,267.0	7,225.3	7,223.6	117.2	12.7	90.35	6,363.6	-1,257.1	266.2	139.5	126.65	2.102 CC, ES, SF		
14,100.0	7,267.0	7,225.9	7,224.3	117.8	12.7	90.49	6,363.6	-1,257.1	268.2	141.0	127.23	2.108		
14,200.0	7,267.0	7,227.8	7,226.2	119.5	12.7	90.90	6,363.7	-1,257.1	297.7	168.7	128.96	2.308		
14,265.5	7,267.0	7,229.1	7,227.4	120.6	12.7	91.17	6,363.7	-1,257.1	332.2	202.1	130.10	2.553		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 34-8 (EXISTING) - ENCANA WELL - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
11,500.0	7,267.0	7,208.2	7,205.9	74.6	12.8	84.69	4,756.9	-1,387.7	970.0	888.3	81.74	11.867		
11,600.0	7,267.0	7,209.8	7,207.5	76.2	12.8	85.33	4,756.9	-1,387.8	871.2	787.7	83.54	10.429		
11,700.0	7,267.0	7,211.4	7,209.0	77.9	12.8	85.96	4,756.9	-1,387.8	772.7	687.4	85.33	9.055		
11,800.0	7,267.0	7,213.0	7,210.6	79.5	12.8	86.61	4,757.0	-1,387.8	674.6	587.5	87.12	7.744		
11,900.0	7,267.0	7,214.6	7,212.2	81.1	12.8	87.26	4,757.0	-1,387.8	577.2	488.3	88.90	6.493		
12,000.0	7,267.0	7,216.2	7,213.9	82.7	12.8	87.91	4,757.0	-1,387.9	480.9	390.2	90.67	5.303		
12,100.0	7,267.0	7,217.8	7,215.5	84.4	12.8	88.57	4,757.1	-1,387.9	386.4	294.0	92.44	4.180		
12,200.0	7,267.0	7,219.5	7,217.1	86.0	12.8	89.24	4,757.1	-1,387.9	295.6	201.4	94.20	3.138		
12,300.0	7,267.0	7,221.1	7,218.8	87.6	12.8	89.91	4,757.1	-1,387.9	213.1	117.1	95.95	2.221		
12,400.0	7,267.0	7,222.8	7,220.4	89.3	12.8	90.58	4,757.1	-1,388.0	153.1	55.4	97.68	1.567		
12,459.8	7,267.0	7,223.8	7,221.4	90.3	12.8	90.99	4,757.2	-1,388.0	140.9	42.2	98.72	1.428	Level 3, CC, ES, SF	
12,500.0	7,267.0	7,224.4	7,222.1	90.9	12.8	91.26	4,757.2	-1,388.0	146.5	47.1	99.41	1.474	Level 3	
12,600.0	7,267.0	7,226.1	7,223.8	92.6	12.8	91.95	4,757.2	-1,388.0	198.8	97.6	101.12	1.966		
12,700.0	7,267.0	7,227.8	7,225.5	94.3	12.8	92.64	4,757.2	-1,388.1	278.4	175.6	102.82	2.708		
12,800.0	7,267.0	7,229.5	7,227.2	95.9	12.9	93.33	4,757.2	-1,388.1	368.2	263.7	104.50	3.523		
12,900.0	7,267.0	7,231.3	7,228.9	97.6	12.9	94.03	4,757.3	-1,388.1	462.1	356.0	106.16	4.353		
13,000.0	7,267.0	7,233.0	7,230.6	99.3	12.9	94.73	4,757.3	-1,388.2	558.2	450.4	107.81	5.177		
13,100.0	7,267.0	7,234.7	7,232.4	100.9	12.9	95.43	4,757.3	-1,388.2	655.4	546.0	109.44	5.989		
13,200.0	7,267.0	7,236.5	7,234.1	102.6	12.9	96.14	4,757.4	-1,388.2	753.4	642.3	111.05	6.784		
13,300.0	7,267.0	7,238.3	7,235.9	104.3	12.9	96.86	4,757.4	-1,388.2	851.8	739.1	112.64	7.562		
13,400.0	7,267.0	7,240.0	7,237.7	106.0	12.9	97.57	4,757.4	-1,388.3	950.5	836.3	114.21	8.323		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8080-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			
13,200.0	7,267.0	7,202.0	7,202.0	102.6	12.6	90.00	6,375.7	-1,205.1	934.8	823.3	111.51	8.383		
13,300.0	7,267.0	7,202.0	7,202.0	104.3	12.6	90.00	6,375.7	-1,205.1	841.5	728.2	113.25	7.430		
13,400.0	7,267.0	7,202.0	7,202.0	106.0	12.6	90.00	6,375.7	-1,205.1	749.8	634.9	114.99	6.521		
13,500.0	7,267.0	7,202.0	7,202.0	107.6	12.6	90.00	6,375.7	-1,205.1	660.7	543.9	116.73	5.660		
13,600.0	7,267.0	7,202.0	7,202.0	109.3	12.6	90.00	6,375.7	-1,205.1	575.0	456.6	118.47	4.854		
13,700.0	7,267.0	7,202.0	7,202.0	111.0	12.6	90.00	6,375.7	-1,205.1	494.8	374.6	120.21	4.116		
13,800.0	7,267.0	7,202.0	7,202.0	112.7	12.6	90.00	6,375.7	-1,205.1	423.2	301.2	121.95	3.470		
13,900.0	7,267.0	7,202.0	7,202.0	114.4	12.6	90.00	6,375.7	-1,205.1	365.1	241.4	123.69	2.951		
14,000.0	7,267.0	7,202.0	7,202.0	116.1	12.6	90.00	6,375.7	-1,205.1	327.8	202.4	125.44	2.614		
14,079.0	7,267.0	7,202.0	7,202.0	117.4	12.6	90.00	6,375.7	-1,205.1	318.2	191.4	126.81	2.509 CC, ES		
14,100.0	7,267.0	7,202.0	7,202.0	117.8	12.6	90.00	6,375.7	-1,205.1	318.9	191.7	127.18	2.507 SF		
14,200.0	7,267.0	7,202.0	7,202.0	119.5	12.6	90.00	6,375.7	-1,205.1	340.4	211.5	128.92	2.641		
14,265.5	7,267.0	7,202.0	7,202.0	120.6	12.6	90.00	6,375.7	-1,205.1	368.8	238.8	130.06	2.836		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8420-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		
10,100.0	7,267.0	7,225.0	7,225.0	53.2	12.6	-90.00	3,356.5	-1,748.7	981.8	923.5	58.24	16.856		
10,200.0	7,267.0	7,225.0	7,225.0	54.6	12.6	-90.00	3,356.5	-1,748.7	884.5	824.6	59.93	14.759		
10,300.0	7,267.0	7,225.0	7,225.0	56.1	12.6	-90.00	3,356.5	-1,748.7	787.8	726.2	61.61	12.787		
10,400.0	7,267.0	7,225.0	7,225.0	57.6	12.6	-90.00	3,356.5	-1,748.7	692.2	628.9	63.31	10.934		
10,500.0	7,267.0	7,225.0	7,225.0	59.0	12.6	-90.00	3,356.5	-1,748.7	597.9	532.9	65.00	9.199		
10,600.0	7,267.0	7,225.0	7,225.0	60.6	12.6	-90.00	3,356.5	-1,748.7	505.9	439.2	66.70	7.585		
10,700.0	7,267.0	7,225.0	7,225.0	62.1	12.6	-90.00	3,356.5	-1,748.7	417.5	349.1	68.40	6.104		
10,800.0	7,267.0	7,225.0	7,225.0	63.6	12.6	-90.00	3,356.5	-1,748.7	335.8	265.6	70.11	4.789		
10,900.0	7,267.0	7,225.0	7,225.0	65.2	12.6	-90.00	3,356.5	-1,748.7	266.7	194.9	71.82	3.714		
11,000.0	7,267.0	7,225.0	7,225.0	66.7	12.6	-90.00	3,356.5	-1,748.7	222.6	149.0	73.53	3.027		
11,058.0	7,267.0	7,225.0	7,225.0	67.6	12.6	-90.00	3,356.5	-1,748.7	214.9	140.4	74.52	2.884	CC, ES, SF	
11,100.0	7,267.0	7,225.0	7,225.0	68.3	12.6	-90.00	3,356.5	-1,748.7	219.0	143.7	75.24	2.910		
11,200.0	7,267.0	7,225.0	7,225.0	69.9	12.6	-90.00	3,356.5	-1,748.7	257.6	180.6	76.96	3.347		
11,300.0	7,267.0	7,225.0	7,225.0	71.4	12.6	-90.00	3,356.5	-1,748.7	323.7	245.0	78.67	4.114		
11,400.0	7,267.0	7,225.0	7,225.0	73.0	12.6	-90.00	3,356.5	-1,748.7	403.9	323.5	80.39	5.024		
11,500.0	7,267.0	7,225.0	7,225.0	74.6	12.6	-90.00	3,356.5	-1,748.7	491.5	409.4	82.12	5.985		
11,600.0	7,267.0	7,225.0	7,225.0	76.2	12.6	-90.00	3,356.5	-1,748.7	583.1	499.2	83.84	6.955		
11,700.0	7,267.0	7,225.0	7,225.0	77.9	12.6	-90.00	3,356.5	-1,748.7	677.0	591.5	85.56	7.913		
11,800.0	7,267.0	7,225.0	7,225.0	79.5	12.6	-90.00	3,356.5	-1,748.7	772.5	685.2	87.29	8.850		
11,900.0	7,267.0	7,225.0	7,225.0	81.1	12.6	-90.00	3,356.5	-1,748.7	869.0	780.0	89.02	9.762		
12,000.0	7,267.0	7,225.0	7,225.0	82.7	12.6	-90.00	3,356.5	-1,748.7	966.2	875.5	90.74	10.648		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 23-17J (EXISTING) - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,400.0	7,267.0	7,657.0	7,330.3	33.6	29.1	-95.24	1,105.6	-2,405.1	956.8	916.5	40.35	23.716		
8,500.0	7,267.0	7,667.8	7,340.9	34.3	29.2	-95.96	1,107.0	-2,403.4	918.9	877.3	41.64	22.071		
8,600.0	7,267.0	7,678.3	7,351.2	35.1	29.2	-96.64	1,108.2	-2,401.9	890.6	847.6	42.98	20.719		
8,700.0	7,267.0	7,688.4	7,361.1	36.0	29.2	-97.31	1,109.5	-2,400.5	872.6	828.3	44.37	19.666		
8,800.0	7,267.0	7,700.0	7,372.5	36.9	29.3	-98.07	1,110.8	-2,398.9	865.8	820.0	45.79	18.908		
8,810.0	7,267.0	7,700.0	7,372.5	37.0	29.3	-98.07	1,110.8	-2,398.9	865.8	819.8	45.94	18.845	CC, ES	
8,900.0	7,267.0	7,700.0	7,372.5	37.9	29.3	-98.07	1,110.8	-2,398.9	870.4	823.2	47.28	18.409		
9,000.0	7,267.0	7,716.5	7,388.8	39.0	29.3	-99.16	1,112.7	-2,396.6	886.2	837.5	48.72	18.188		
9,100.0	7,267.0	7,725.3	7,397.4	40.1	29.4	-99.73	1,113.7	-2,395.4	912.6	862.4	50.22	18.174	SF	
9,200.0	7,267.0	7,733.7	7,405.7	41.3	29.4	-100.28	1,114.6	-2,394.3	948.8	897.1	51.72	18.345		
9,300.0	7,267.0	7,741.9	7,413.8	42.5	29.4	-100.82	1,115.5	-2,393.3	993.6	940.4	53.23	18.666		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 23-17J (EXISTING) - DD - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 639-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
8,300.0	7,267.0	7,596.4	7,281.5	32.9	28.5	-92.03	1,075.2	-2,405.1	985.5	947.0	38.57	25.551		
8,400.0	7,267.0	7,605.6	7,290.7	33.6	28.6	-92.64	1,076.3	-2,404.2	941.4	901.6	39.81	23.650		
8,500.0	7,267.0	7,615.6	7,300.5	34.3	28.6	-93.29	1,077.3	-2,403.3	906.2	865.0	41.12	22.039		
8,600.0	7,267.0	7,624.6	7,309.4	35.1	28.6	-93.88	1,078.3	-2,402.5	880.7	838.3	42.48	20.732		
8,700.0	7,267.0	7,634.4	7,319.2	36.0	28.6	-94.53	1,079.2	-2,401.6	866.1	822.2	43.89	19.732		
8,778.9	7,267.0	7,639.6	7,324.4	36.7	28.7	-94.88	1,079.7	-2,401.2	862.5	817.5	45.04	19.150 CC		
8,800.0	7,267.0	7,641.4	7,326.2	36.9	28.7	-95.00	1,079.9	-2,401.0	862.8	817.4	45.35	19.027 ES		
8,900.0	7,267.0	7,649.7	7,334.3	37.9	28.7	-95.54	1,080.7	-2,400.3	870.9	824.1	46.83	18.599		
9,000.0	7,267.0	7,657.2	7,341.9	39.0	28.7	-96.04	1,081.3	-2,399.7	890.2	841.9	48.33	18.418 SF		
9,100.0	7,267.0	7,665.5	7,350.1	40.1	28.7	-96.59	1,082.0	-2,399.0	920.0	870.1	49.86	18.452		
9,200.0	7,267.0	7,670.6	7,355.1	41.3	28.7	-96.93	1,082.4	-2,398.6	959.2	907.8	51.41	18.659		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 31-17C (EXISTING) - SUNDANCE WELL - GYRO													Offset Site Error: 0.0 ft	
Survey Program: 100-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		
10,600.0	7,267.0	7,227.9	7,226.6	60.6	12.7	91.72	3,722.1	-1,014.7	975.1	908.4	66.70	14.619		
10,700.0	7,267.0	7,228.1	7,226.8	62.1	12.7	91.74	3,722.1	-1,014.7	892.0	823.6	68.40	13.040		
10,800.0	7,267.0	7,228.2	7,227.0	63.6	12.7	91.76	3,722.1	-1,014.7	812.7	742.5	70.11	11.592		
10,900.0	7,267.0	7,228.4	7,227.1	65.2	12.7	91.79	3,722.1	-1,014.7	738.4	666.6	71.81	10.282		
11,000.0	7,267.0	7,228.6	7,227.3	66.7	12.7	91.81	3,722.1	-1,014.7	670.8	597.3	73.52	9.123		
11,100.0	7,267.0	7,228.8	7,227.5	68.3	12.7	91.83	3,722.1	-1,014.7	612.2	536.9	75.24	8.137		
11,200.0	7,267.0	7,229.0	7,227.7	69.9	12.7	91.85	3,722.1	-1,014.7	565.3	488.3	76.95	7.346		
11,300.0	7,267.0	7,229.2	7,227.9	71.4	12.7	91.87	3,722.1	-1,014.7	533.2	454.5	78.67	6.778		
11,400.0	7,267.0	7,229.4	7,228.1	73.0	12.7	91.89	3,722.1	-1,014.7	518.7	438.3	80.39	6.453		
11,426.1	7,267.0	7,229.4	7,228.1	73.5	12.7	91.90	3,722.1	-1,014.7	518.1	437.2	80.83	6.409 CC, ES		
11,500.0	7,267.0	7,229.6	7,228.3	74.6	12.7	91.91	3,722.1	-1,014.7	523.3	441.2	82.10	6.374 SF		
11,600.0	7,267.0	7,229.8	7,228.5	76.2	12.7	91.93	3,722.1	-1,014.7	546.5	462.7	83.83	6.519		
11,700.0	7,267.0	7,230.0	7,228.7	77.9	12.7	91.96	3,722.1	-1,014.7	586.0	500.5	85.55	6.850		
11,800.0	7,267.0	7,230.2	7,228.9	79.5	12.7	91.98	3,722.1	-1,014.8	638.9	551.6	87.27	7.321		
11,900.0	7,267.0	7,230.4	7,229.1	81.1	12.7	92.00	3,722.1	-1,014.8	702.1	613.1	89.00	7.889		
12,000.0	7,267.0	7,230.6	7,229.3	82.7	12.8	92.03	3,722.1	-1,014.8	773.1	682.4	90.72	8.522		
12,100.0	7,267.0	7,230.8	7,229.5	84.4	12.8	92.05	3,722.1	-1,014.8	850.0	757.6	92.45	9.194		
12,200.0	7,267.0	7,231.0	7,229.7	86.0	12.8	92.07	3,722.1	-1,014.8	931.3	837.1	94.18	9.888		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8150-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				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	-41.99	402.9	-362.6	542.9					
100.0	100.0	70.0	70.0	0.1	0.1	-41.99	402.9	-362.6	542.1	541.8	0.24	2,216.645		
200.0	200.0	170.0	170.0	0.3	0.3	-41.99	402.9	-362.6	542.1	541.5	0.59	913.176		
300.0	300.0	270.0	270.0	0.5	0.5	67.31	402.9	-362.6	541.4	540.4	0.95	572.340		
400.0	399.8	369.8	369.8	0.7	0.6	67.86	402.9	-362.6	539.4	538.1	1.31	410.785		
500.0	499.5	469.5	469.5	0.9	0.8	68.78	402.9	-362.6	536.2	534.5	1.71	314.012		
600.0	598.7	568.7	568.7	1.2	1.0	70.08	402.9	-362.6	531.9	529.7	2.14	248.472		
700.0	697.5	667.5	667.5	1.5	1.2	71.76	402.9	-362.6	526.7	524.1	2.62	200.866		
800.0	795.6	765.6	765.6	1.9	1.3	73.83	402.9	-362.6	520.9	517.8	3.16	164.838		
884.5	878.0	848.0	848.0	2.2	1.5	75.88	402.9	-362.6	515.9	512.3	3.66	140.917		
900.0	893.1	863.1	863.1	2.3	1.5	76.27	402.9	-362.6	515.0	511.3	3.75	137.173		
1,000.0	990.2	960.2	960.2	2.7	1.7	78.78	402.9	-362.6	509.8	505.4	4.37	116.778		
1,100.0	1,087.4	1,057.4	1,057.4	3.2	1.8	81.34	402.9	-362.6	505.5	500.6	4.99	101.399		
1,200.0	1,184.5	1,154.5	1,154.5	3.6	2.0	83.93	402.9	-362.6	502.4	496.8	5.61	89.534		
1,300.0	1,281.7	1,251.7	1,251.7	4.1	2.2	86.55	402.9	-362.6	500.4	494.2	6.24	80.210		
1,400.0	1,378.9	1,348.9	1,348.9	4.5	2.4	89.19	402.9	-362.6	499.5	492.6	6.86	72.773		
1,430.8	1,408.8	1,378.8	1,378.8	4.6	2.4	90.00	402.9	-362.6	499.4	492.4	7.06	70.787	CC	
1,500.0	1,476.0	1,446.0	1,446.0	5.0	2.5	91.82	402.9	-362.6	499.7	492.2	7.48	66.774	ES	
1,600.0	1,573.2	1,543.2	1,543.2	5.4	2.7	94.45	402.9	-362.6	501.1	493.0	8.10	61.891		
1,700.0	1,670.3	1,640.3	1,640.3	5.9	2.9	97.06	402.9	-362.6	503.5	494.8	8.70	57.893		
1,800.0	1,767.5	1,737.5	1,737.5	6.3	3.0	99.65	402.9	-362.6	507.0	497.7	9.29	54.604		
1,900.0	1,864.7	1,834.7	1,834.7	6.8	3.2	102.19	402.9	-362.6	511.6	501.8	9.86	51.891		
2,000.0	1,961.8	1,931.8	1,931.8	7.2	3.4	104.68	402.9	-362.6	517.3	506.9	10.42	49.653		
2,100.0	2,059.0	2,029.0	2,029.0	7.7	3.5	107.12	402.9	-362.6	524.0	513.0	10.96	47.808		
2,200.0	2,156.1	2,126.1	2,126.1	8.1	3.7	109.50	402.9	-362.6	531.6	520.1	11.48	46.291		
2,300.0	2,253.3	2,223.3	2,223.3	8.6	3.9	111.81	402.9	-362.6	540.2	528.2	11.99	45.051		
2,400.0	2,350.4	2,320.4	2,320.4	9.1	4.1	114.05	402.9	-362.6	549.6	537.1	12.48	44.044		
2,500.0	2,447.6	2,417.6	2,417.6	9.5	4.2	116.21	402.9	-362.6	559.9	546.9	12.95	43.237		
2,600.0	2,544.8	2,514.8	2,514.8	10.0	4.4	118.29	402.9	-362.6	571.0	557.6	13.40	42.598		
2,700.0	2,641.9	2,611.9	2,611.9	10.4	4.6	120.30	402.9	-362.6	582.8	569.0	13.84	42.104		
2,800.0	2,739.1	2,709.1	2,709.1	10.9	4.7	122.23	402.9	-362.6	595.4	581.1	14.27	41.735		
2,900.0	2,836.2	2,806.2	2,806.2	11.3	4.9	124.08	402.9	-362.6	608.6	593.9	14.67	41.471		
3,000.0	2,933.4	2,903.4	2,903.4	11.8	5.1	125.85	402.9	-362.6	622.4	607.3	15.07	41.300		
3,100.0	3,030.6	3,000.6	3,000.6	12.3	5.2	127.54	402.9	-362.6	636.8	621.3	15.45	41.207		
3,200.0	3,127.7	3,097.7	3,097.7	12.7	5.4	129.16	402.9	-362.6	651.7	635.9	15.83	41.181	SF	
3,300.0	3,224.9	3,194.9	3,194.9	13.2	5.6	130.71	402.9	-362.6	667.2	651.0	16.19	41.213		
3,400.0	3,322.0	3,292.0	3,292.0	13.6	5.7	132.20	402.9	-362.6	683.1	666.6	16.54	41.296		
3,500.0	3,419.2	3,389.2	3,389.2	14.1	5.9	133.61	402.9	-362.6	699.5	682.6	16.89	41.421		
3,600.0	3,516.4	3,486.4	3,486.4	14.5	6.1	134.96	402.9	-362.6	716.3	699.0	17.23	41.582		
3,700.0	3,613.5	3,583.5	3,583.5	15.0	6.3	136.25	402.9	-362.6	733.4	715.8	17.56	41.774		
3,800.0	3,710.7	3,680.7	3,680.7	15.5	6.4	137.49	402.9	-362.6	750.9	733.0	17.88	41.993		
3,900.0	3,807.8	3,777.8	3,777.8	15.9	6.6	138.66	402.9	-362.6	768.7	750.5	18.20	42.233		
4,000.0	3,905.0	3,875.0	3,875.0	16.4	6.8	139.79	402.9	-362.6	786.9	768.4	18.52	42.492		
4,100.0	4,002.2	3,972.2	3,972.2	16.8	6.9	140.86	402.9	-362.6	805.3	786.5	18.83	42.767		
4,200.0	4,099.3	4,069.3	4,069.3	17.3	7.1	141.89	402.9	-362.6	824.0	804.9	19.14	43.054		
4,300.0	4,196.5	4,166.5	4,166.5	17.7	7.3	142.87	402.9	-362.6	843.0	823.5	19.44	43.351		
4,400.0	4,293.6	4,263.6	4,263.6	18.2	7.4	143.81	402.9	-362.6	862.1	842.4	19.75	43.657		
4,500.0	4,390.8	4,360.8	4,360.8	18.7	7.6	144.71	402.9	-362.6	881.5	861.5	20.05	43.968		
4,600.0	4,487.9	4,457.9	4,457.9	19.1	7.8	145.58	402.9	-362.6	901.1	880.8	20.35	44.285		
4,700.0	4,585.1	4,555.1	4,555.1	19.6	8.0	146.40	402.9	-362.6	920.9	900.3	20.65	44.604		
4,800.0	4,682.3	4,652.3	4,652.3	20.0	8.1	147.19	402.9	-362.6	940.9	920.0	20.94	44.926		
4,900.0	4,779.4	4,749.4	4,749.4	20.5	8.3	147.95	402.9	-362.6	961.0	939.8	21.24	45.249		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design												S17-T2N-R67W (Big Horn) - MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS		Offset Site Error:		0.0 ft	
Survey Program:												8150-Geolink MWD		Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning				
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis						
5,000.0	4,876.6	4,846.6	4,846.6	20.9	8.5	148.68	402.9	-362.6	981.3	959.8	21.53	45.571					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 33-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 608-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	-98.10	-92.5	-650.4	657.4					
100.0	100.0	74.0	74.0	0.1	0.1	-98.10	-92.5	-650.4	656.9	656.7	0.25	2,611.937		
200.0	200.0	174.0	174.0	0.3	0.3	-98.10	-92.5	-650.4	656.9	656.3	0.60	1,093.874		
300.0	300.0	274.0	274.0	0.5	0.5	11.06	-92.5	-650.4	655.2	654.2	0.95	690.153		
400.0	399.8	373.8	373.8	0.7	0.7	11.17	-92.5	-650.4	650.1	648.8	1.30	500.936		
500.0	499.5	473.5	473.5	0.9	0.8	11.35	-92.5	-650.4	641.5	639.9	1.65	389.839		
600.0	598.7	572.7	572.7	1.2	1.0	11.62	-92.5	-650.4	629.6	627.6	1.99	315.852		
700.0	697.5	669.4	669.4	1.5	1.2	11.96	-92.6	-650.5	614.4	612.0	2.34	262.811		
800.0	795.6	766.6	766.6	1.9	1.3	12.39	-92.9	-650.9	596.2	593.5	2.69	221.998		
884.5	878.0	848.8	848.8	2.2	1.5	12.83	-93.3	-651.3	578.2	575.3	2.98	193.875		
900.0	893.1	863.8	863.8	2.3	1.5	12.91	-93.4	-651.3	574.7	571.7	3.04	189.129		
1,000.0	990.2	960.9	960.9	2.7	1.7	13.39	-94.1	-651.8	552.2	548.8	3.41	162.166		
1,100.0	1,087.4	1,057.8	1,057.8	3.2	1.8	13.89	-95.0	-652.4	529.8	526.0	3.78	140.312		
1,200.0	1,184.5	1,154.7	1,154.7	3.6	2.0	14.43	-95.8	-653.0	507.5	503.4	4.15	122.253		
1,300.0	1,281.7	1,251.6	1,251.6	4.1	2.2	15.03	-96.7	-653.7	485.4	480.9	4.53	107.086		
1,400.0	1,378.9	1,348.5	1,348.4	4.5	2.4	15.68	-97.5	-654.5	463.4	458.5	4.92	94.181		
1,500.0	1,476.0	1,445.2	1,445.2	5.0	2.5	16.43	-98.1	-655.5	441.6	436.3	5.32	83.073		
1,600.0	1,573.2	1,542.0	1,541.9	5.4	2.7	17.30	-98.5	-656.6	420.1	414.3	5.72	73.403		
1,700.0	1,670.3	1,638.8	1,638.7	5.9	2.9	18.30	-98.5	-657.9	398.8	392.6	6.14	64.912		
1,800.0	1,767.5	1,735.9	1,735.8	6.3	3.0	19.42	-98.6	-659.3	377.7	371.1	6.58	57.404		
1,900.0	1,864.7	1,833.1	1,833.0	6.8	3.2	20.64	-98.8	-660.8	356.9	349.9	7.03	50.741		
2,000.0	1,961.8	1,930.3	1,930.2	7.2	3.4	21.98	-99.1	-662.4	336.4	328.9	7.51	44.797		
2,100.0	2,059.0	2,027.3	2,027.2	7.7	3.6	23.44	-99.8	-664.1	316.2	308.1	8.01	39.490		
2,200.0	2,156.1	2,124.6	2,124.5	8.1	3.7	25.10	-100.4	-666.0	296.3	287.8	8.53	34.723		
2,300.0	2,253.3	2,221.7	2,221.6	8.6	3.9	27.38	-99.2	-667.7	276.9	267.8	9.13	30.335		
2,400.0	2,350.4	2,318.8	2,318.6	9.1	4.1	30.17	-97.1	-669.5	258.1	248.3	9.79	26.359		
2,500.0	2,447.6	2,416.1	2,415.9	9.5	4.2	33.23	-95.7	-671.5	240.1	229.6	10.52	22.834		
2,600.0	2,544.8	2,513.6	2,513.4	10.0	4.4	36.62	-94.8	-673.7	222.9	211.6	11.30	19.724		
2,700.0	2,641.9	2,612.0	2,611.7	10.4	4.6	40.76	-93.4	-675.6	206.5	194.3	12.19	16.935		
2,800.0	2,739.1	2,709.6	2,709.2	10.9	4.8	46.36	-89.6	-676.0	191.1	177.8	13.25	14.417		
2,900.0	2,836.2	2,807.1	2,806.7	11.3	4.9	52.82	-85.9	-676.2	177.5	163.1	14.41	12.321		
3,000.0	2,933.4	2,904.7	2,904.2	11.8	5.1	60.08	-82.8	-676.3	166.1	150.5	15.60	10.649		
3,100.0	3,030.6	3,002.0	3,001.5	12.3	5.3	68.05	-80.3	-676.4	157.4	140.7	16.78	9.385		
3,200.0	3,127.7	3,098.8	3,098.3	12.7	5.4	76.51	-78.1	-676.9	152.2	134.4	17.84	8.531		
3,288.9	3,214.1	3,185.1	3,184.5	13.1	5.6	84.21	-76.2	-677.6	150.7	132.1	18.63	8.088 CC		
3,300.0	3,224.9	3,195.8	3,195.3	13.2	5.6	85.17	-76.0	-677.8	150.7	132.0	18.72	8.052 ES		
3,400.0	3,322.0	3,293.1	3,292.5	13.6	5.8	93.62	-74.0	-679.2	152.9	133.6	19.37	7.896		
3,500.0	3,419.2	3,390.5	3,389.9	14.1	6.0	101.54	-72.2	-681.0	158.4	138.6	19.79	8.006		
3,600.0	3,516.4	3,488.0	3,487.4	14.5	6.1	108.72	-70.4	-683.1	166.8	146.8	20.03	8.329		
3,700.0	3,613.5	3,585.7	3,585.0	15.0	6.3	115.06	-68.6	-685.6	177.5	157.4	20.13	8.817		
3,800.0	3,710.7	3,683.4	3,682.6	15.5	6.5	120.59	-66.9	-688.3	190.1	169.9	20.17	9.426		
3,900.0	3,807.8	3,780.8	3,780.0	15.9	6.7	125.50	-65.3	-690.6	204.3	184.1	20.15	10.139		
4,000.0	3,905.0	3,878.1	3,877.3	16.4	6.8	129.87	-63.8	-692.5	219.8	199.7	20.10	10.935		
4,100.0	4,002.2	3,975.6	3,974.7	16.8	7.0	133.74	-62.4	-694.1	236.6	216.5	20.06	11.796		
4,200.0	4,099.3	4,058.9	4,058.0	17.3	7.2	136.64	-59.5	-694.5	256.5	236.4	20.08	12.774		
4,300.0	4,196.5	4,147.2	4,145.8	17.7	7.3	138.52	-50.5	-695.8	282.1	261.9	20.26	13.926		
4,400.0	4,293.6	4,236.0	4,233.8	18.2	7.5	139.60	-38.7	-698.6	309.9	289.3	20.57	15.065		
4,500.0	4,390.8	4,327.8	4,324.2	18.7	7.7	140.05	-23.3	-702.6	339.8	318.8	21.00	16.183		
4,600.0	4,487.9	4,417.5	4,412.1	19.1	7.9	140.06	-6.7	-708.1	370.4	348.9	21.52	17.216		
4,700.0	4,585.1	4,503.0	4,495.2	19.6	8.2	139.60	12.3	-715.0	402.9	380.8	22.13	18.208		
4,800.0	4,682.3	4,581.5	4,570.6	20.0	8.4	138.88	33.0	-722.2	438.4	415.6	22.80	19.229		
4,900.0	4,779.4	4,662.1	4,646.6	20.5	8.7	137.75	58.0	-731.5	476.8	453.2	23.58	20.221		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 33-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 608-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,000.0	4,876.6	4,743.5	4,722.4	20.9	9.0	136.53	85.8	-741.5	517.6	493.2	24.40	21.214		
5,100.0	4,973.7	4,821.8	4,794.6	21.4	9.4	135.32	114.2	-752.0	560.1	534.9	25.23	22.200		
5,200.0	5,070.9	4,890.5	4,857.2	21.9	9.7	134.32	141.2	-760.7	605.6	579.6	26.00	23.295		
5,300.0	5,168.1	4,969.1	4,927.8	22.3	10.1	133.17	174.1	-771.1	653.2	626.4	26.84	24.336		
5,400.0	5,265.2	5,035.0	4,985.9	22.8	10.5	132.11	203.6	-781.1	703.0	675.4	27.65	25.429		
5,500.0	5,362.4	5,144.4	5,080.3	23.2	11.2	130.12	254.5	-802.5	753.5	724.6	28.83	26.135		
5,600.0	5,459.5	5,233.8	5,158.0	23.7	11.8	128.60	294.0	-822.4	801.4	771.5	29.85	26.845		
5,700.0	5,556.7	5,319.7	5,232.5	24.1	12.4	127.31	332.5	-841.2	850.3	819.5	30.82	27.594		
5,800.0	5,653.9	5,382.0	5,286.6	24.6	12.9	126.52	360.7	-854.0	900.3	868.7	31.59	28.498		
5,900.0	5,751.0	5,462.8	5,355.3	25.1	13.5	125.42	399.1	-872.1	952.2	919.7	32.52	29.282		
7,900.0	7,267.0	7,490.0	7,196.3	31.1	27.0	81.78	1,109.7	-1,232.4	965.0	926.5	38.43	25.109		
8,000.0	7,267.0	7,497.9	7,204.2	31.4	27.0	83.21	1,110.3	-1,232.9	870.9	831.6	39.32	22.148		
8,100.0	7,267.0	7,505.4	7,211.7	31.8	27.0	84.57	1,110.8	-1,233.3	778.3	738.0	40.35	19.288		
8,200.0	7,267.0	7,512.4	7,218.7	32.3	27.1	85.85	1,111.3	-1,233.7	687.7	646.2	41.49	16.573		
8,300.0	7,267.0	7,519.1	7,225.3	32.9	27.1	87.08	1,111.7	-1,234.1	600.0	557.2	42.73	14.042		
8,400.0	7,267.0	7,525.4	7,231.7	33.6	27.1	88.26	1,112.1	-1,234.5	516.7	472.6	44.03	11.733		
8,500.0	7,267.0	7,531.5	7,237.7	34.3	27.1	89.38	1,112.5	-1,234.8	440.3	394.9	45.40	9.698		
8,600.0	7,267.0	7,537.4	7,243.6	35.1	27.1	90.49	1,112.8	-1,235.1	375.0	328.2	46.81	8.012		
8,700.0	7,267.0	7,543.3	7,249.5	36.0	27.1	91.59	1,113.2	-1,235.4	327.7	279.5	48.25	6.792		
8,800.0	7,267.0	7,549.0	7,255.1	36.9	27.1	92.64	1,113.5	-1,235.7	306.7	257.0	49.72	6.169		
8,816.8	7,267.0	7,549.9	7,256.0	37.1	27.1	92.81	1,113.6	-1,235.7	306.3	256.3	49.97	6.129 SF		
8,900.0	7,267.0	7,554.4	7,260.5	37.9	27.1	93.66	1,113.8	-1,235.9	317.4	266.1	51.21	6.198		
9,000.0	7,267.0	7,559.6	7,265.8	39.0	27.1	94.63	1,114.1	-1,236.2	356.8	304.1	52.70	6.769		
9,100.0	7,267.0	7,564.7	7,270.8	40.1	27.2	95.57	1,114.4	-1,236.4	416.9	362.7	54.21	7.690		
9,200.0	7,267.0	7,569.3	7,275.4	41.3	27.2	96.44	1,114.6	-1,236.6	490.1	434.4	55.72	8.796		
9,300.0	7,267.0	7,573.6	7,279.7	42.5	27.2	97.24	1,114.8	-1,236.8	571.5	514.3	57.24	9.984		
9,400.0	7,267.0	7,577.6	7,283.7	43.7	27.2	97.98	1,115.0	-1,237.0	658.0	599.3	58.77	11.197		
9,500.0	7,267.0	7,581.4	7,287.4	45.0	27.2	98.67	1,115.2	-1,237.2	747.9	687.6	60.29	12.404		
9,600.0	7,267.0	7,584.9	7,290.9	46.3	27.2	99.32	1,115.4	-1,237.4	840.0	778.2	61.83	13.587		
9,700.0	7,267.0	7,588.2	7,294.2	47.6	27.2	99.92	1,115.5	-1,237.5	933.7	870.4	63.36	14.737		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 34-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 627-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis		Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-99.41	-111.5	-672.5	682.1					
100.0	100.0	74.0	74.0	0.1	0.1	-99.41	-111.5	-672.5	681.6	681.4	0.25	2,710.204		
200.0	200.0	174.0	174.0	0.3	0.3	-99.41	-111.5	-672.5	681.6	681.0	0.60	1,135.028		
300.0	300.0	274.0	274.0	0.5	0.5	9.74	-111.5	-672.5	679.9	679.0	0.95	716.204		
400.0	399.8	373.8	373.8	0.7	0.7	9.83	-111.5	-672.5	674.7	673.5	1.30	520.051		
500.0	499.5	473.5	473.5	0.9	0.8	9.99	-111.5	-672.5	666.2	664.5	1.64	405.001		
600.0	598.7	572.7	572.7	1.2	1.0	10.22	-111.5	-672.5	654.2	652.2	1.99	328.484		
700.0	697.5	670.4	670.4	1.5	1.2	10.51	-111.5	-672.5	638.8	636.5	2.34	273.499		
800.0	795.6	766.0	766.0	1.9	1.3	10.85	-112.0	-672.8	620.4	617.7	2.68	231.705		
884.5	878.0	846.2	846.2	2.2	1.5	11.21	-112.6	-673.3	602.6	599.6	2.97	203.083		
900.0	893.1	860.9	860.9	2.3	1.5	11.27	-112.7	-673.4	599.1	596.1	3.02	198.248		
1,000.0	990.2	955.7	955.7	2.7	1.7	11.66	-113.3	-674.6	577.2	573.8	3.38	170.793		
1,100.0	1,087.4	1,051.4	1,051.4	3.2	1.8	12.10	-114.0	-676.1	555.6	551.9	3.74	148.508		
1,200.0	1,184.5	1,151.0	1,150.9	3.6	2.0	12.59	-114.7	-677.6	534.0	529.9	4.11	129.803		
1,300.0	1,281.7	1,250.4	1,250.3	4.1	2.2	13.12	-115.3	-678.8	512.1	507.7	4.49	114.030		
1,400.0	1,378.9	1,349.5	1,349.5	4.5	2.4	13.69	-115.9	-679.6	489.9	485.1	4.87	100.536		
1,500.0	1,476.0	1,445.9	1,445.8	5.0	2.5	14.31	-116.5	-680.3	467.7	462.5	5.26	88.992		
1,600.0	1,573.2	1,542.3	1,542.2	5.4	2.7	15.01	-116.9	-681.3	445.8	440.1	5.65	78.953		
1,700.0	1,670.3	1,638.8	1,638.7	5.9	2.9	15.79	-117.3	-682.4	424.1	418.0	6.05	70.151		
1,800.0	1,767.5	1,736.4	1,736.3	6.3	3.0	16.68	-117.5	-683.7	402.6	396.2	6.46	62.338		
1,900.0	1,864.7	1,834.3	1,834.2	6.8	3.2	17.71	-117.6	-684.9	381.1	374.3	6.89	55.342		
2,000.0	1,961.8	1,932.1	1,932.0	7.2	3.4	18.88	-117.4	-686.0	359.7	352.4	7.33	49.044		
2,100.0	2,059.0	2,030.0	2,029.9	7.7	3.6	20.24	-117.1	-687.0	338.3	330.5	7.80	43.346		
2,200.0	2,156.1	2,128.1	2,128.0	8.1	3.7	21.75	-117.0	-687.8	316.9	308.6	8.30	38.173		
2,300.0	2,253.3	2,226.1	2,226.0	8.6	3.9	23.44	-117.1	-688.3	295.5	286.7	8.83	33.470		
2,400.0	2,350.4	2,324.1	2,324.0	9.1	4.1	25.33	-117.4	-688.6	274.1	264.7	9.39	29.185		
2,500.0	2,447.6	2,421.4	2,421.3	9.5	4.2	27.48	-118.0	-688.8	253.0	243.0	10.00	25.294		
2,600.0	2,544.8	2,518.8	2,518.7	10.0	4.4	29.95	-118.8	-689.0	232.1	221.5	10.67	21.765		
2,700.0	2,641.9	2,616.2	2,616.1	10.4	4.6	32.84	-119.9	-689.2	211.7	200.3	11.40	18.574		
2,800.0	2,739.1	2,713.3	2,713.1	10.9	4.7	36.32	-120.9	-689.4	192.0	179.8	12.23	15.704		
2,900.0	2,836.2	2,810.2	2,810.1	11.3	4.9	40.67	-121.5	-689.7	173.3	160.1	13.18	13.150		
3,000.0	2,933.4	2,907.1	2,907.0	11.8	5.1	46.14	-121.7	-689.9	156.0	141.7	14.28	10.929		
3,100.0	3,030.6	3,003.8	3,003.7	12.3	5.3	52.91	-121.6	-690.3	140.8	125.3	15.52	9.074		
3,200.0	3,127.7	3,100.6	3,100.5	12.7	5.4	61.05	-121.3	-691.1	128.4	111.6	16.84	7.625		
3,300.0	3,224.9	3,197.5	3,197.4	13.2	5.6	70.52	-120.9	-692.3	119.6	101.5	18.14	6.594		
3,400.0	3,322.0	3,294.7	3,294.5	13.6	5.8	80.95	-120.4	-693.8	115.0	95.7	19.25	5.973		
3,458.9	3,379.3	3,352.2	3,352.0	13.9	5.9	87.28	-120.1	-695.0	114.2	94.5	19.75	5.785 CC, ES		
3,500.0	3,419.2	3,392.3	3,392.1	14.1	5.9	91.66	-120.0	-695.8	114.6	94.6	20.02	5.725 SF		
3,600.0	3,516.4	3,490.0	3,489.8	14.5	6.1	101.89	-119.8	-698.2	118.2	97.8	20.39	5.797		
3,700.0	3,613.5	3,587.8	3,587.5	15.0	6.3	111.09	-119.7	-701.0	125.3	104.9	20.45	6.126		
3,800.0	3,710.7	3,684.7	3,684.4	15.5	6.5	119.11	-119.3	-703.6	135.7	115.4	20.31	6.682		
3,900.0	3,807.8	3,781.4	3,781.1	15.9	6.6	125.97	-118.4	-705.9	149.1	129.0	20.07	7.429		
4,000.0	3,905.0	3,878.0	3,877.7	16.4	6.8	131.69	-116.9	-707.9	164.9	145.1	19.81	8.324		
4,100.0	4,002.2	3,976.2	3,975.8	16.8	7.0	136.52	-115.4	-709.7	182.2	162.6	19.58	9.303		
4,200.0	4,099.3	4,074.7	4,074.3	17.3	7.1	140.60	-114.5	-711.6	200.0	180.6	19.40	10.308		
4,300.0	4,196.5	4,173.3	4,172.9	17.7	7.3	144.09	-114.2	-713.5	218.1	198.9	19.27	11.322		
4,400.0	4,293.6	4,270.5	4,270.1	18.2	7.5	147.07	-114.2	-715.3	236.7	217.6	19.19	12.339		
4,500.0	4,390.8	4,367.2	4,366.8	18.7	7.7	149.62	-114.1	-716.8	256.2	237.0	19.16	13.373		
4,600.0	4,487.9	4,463.9	4,463.4	19.1	7.8	151.82	-113.7	-718.1	276.3	257.1	19.17	14.412		
4,700.0	4,585.1	4,560.8	4,560.3	19.6	8.0	153.74	-113.3	-719.2	297.0	277.8	19.23	15.449		
4,800.0	4,682.3	4,658.0	4,657.5	20.0	8.2	155.41	-112.7	-720.3	318.1	298.8	19.32	16.467		
4,900.0	4,779.4	4,755.1	4,754.6	20.5	8.3	156.86	-112.1	-721.3	339.5	320.1	19.45	17.460		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 34-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 627-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,000.0	4,876.6	4,852.3	4,851.8	20.9	8.5	158.15	-111.5	-722.3	361.1	341.5	19.60	18.426		
5,100.0	4,973.7	4,949.5	4,949.0	21.4	8.7	159.27	-110.7	-723.3	383.0	363.2	19.78	19.361		
5,200.0	5,070.9	5,046.7	5,046.2	21.9	8.9	160.26	-109.9	-724.4	404.9	384.9	19.98	20.264		
5,300.0	5,168.1	5,144.1	5,143.6	22.3	9.0	161.13	-108.9	-725.5	427.0	406.8	20.20	21.135		
5,400.0	5,265.2	5,242.8	5,242.3	22.8	9.2	161.89	-107.9	-727.0	449.0	428.6	20.45	21.961		
5,500.0	5,362.4	5,340.3	5,339.7	23.2	9.4	162.54	-106.7	-728.8	470.8	450.1	20.71	22.738		
5,600.0	5,459.5	5,471.7	5,471.0	23.7	9.6	163.26	-107.3	-735.0	489.6	468.6	21.01	23.303		
5,700.0	5,556.7	5,584.4	5,583.2	24.1	9.8	163.98	-112.2	-744.3	503.2	481.9	21.28	23.648		
5,800.0	5,653.9	5,713.2	5,710.7	24.6	10.1	164.46	-118.6	-760.6	513.0	491.3	21.62	23.721		
5,900.0	5,751.0	5,830.2	5,825.8	25.1	10.4	165.02	-128.5	-779.2	518.0	496.0	21.93	23.617		
6,000.0	5,848.2	5,957.8	5,950.3	25.5	10.7	165.59	-141.9	-803.8	519.1	496.8	22.26	23.323		
6,100.0	5,945.3	6,083.0	6,071.0	26.0	11.0	166.11	-158.0	-832.8	515.7	493.1	22.58	22.834		
6,200.0	6,042.5	6,214.7	6,195.4	26.4	11.5	166.33	-176.7	-871.6	505.8	482.8	22.99	22.001		
6,300.0	6,139.6	6,329.7	6,302.1	26.9	12.0	166.34	-194.5	-910.7	491.2	467.8	23.41	20.986		
6,400.0	6,236.8	6,435.9	6,399.5	27.3	12.5	166.14	-210.8	-949.7	474.2	450.3	23.86	19.876		
6,500.0	6,334.0	6,543.7	6,497.6	27.8	13.0	166.15	-230.2	-990.1	455.0	430.7	24.26	18.751		
6,600.0	6,431.1	6,639.0	6,584.2	28.3	13.5	166.55	-250.0	-1,024.7	435.2	410.6	24.55	17.723		
6,700.0	6,528.3	6,725.8	6,663.7	28.7	14.0	166.69	-265.4	-1,055.5	417.9	393.0	24.89	16.790		
6,800.0	6,625.4	6,816.0	6,746.9	29.2	14.5	166.78	-280.6	-1,087.1	401.7	376.5	25.24	15.915		
6,840.6	6,664.9	6,852.3	6,780.7	29.4	14.6	166.71	-285.6	-1,099.5	396.1	370.7	25.41	15.588		
6,850.0	6,674.0	6,860.7	6,788.5	29.4	14.7	163.07	-286.7	-1,102.4	394.8	369.4	25.44	15.521		
6,900.0	6,722.7	6,904.5	6,829.4	29.6	14.9	142.52	-291.8	-1,117.2	387.0	361.5	25.48	15.186		
6,950.0	6,771.3	6,941.0	6,863.7	29.8	15.1	124.13	-296.0	-1,128.8	378.1	352.7	25.36	14.908		
7,000.0	6,819.4	6,979.4	6,900.3	29.9	15.3	111.43	-300.4	-1,139.6	368.8	343.6	25.13	14.677		
7,050.0	6,866.7	7,024.7	6,943.6	30.1	15.5	104.36	-305.3	-1,151.8	358.5	333.7	24.86	14.422		
7,100.0	6,912.8	7,066.0	6,983.3	30.2	15.7	101.01	-309.5	-1,162.7	347.7	323.0	24.75	14.049		
7,150.0	6,957.3	7,099.4	7,015.5	30.3	15.8	99.75	-312.6	-1,170.8	337.5	312.6	24.87	13.570		
7,200.0	6,999.9	7,135.3	7,050.3	30.3	15.9	100.49	-315.8	-1,178.9	328.6	303.3	25.25	13.015		
7,250.0	7,040.4	7,167.2	7,081.4	30.4	16.1	102.02	-318.5	-1,185.4	322.0	296.2	25.78	12.492		
7,300.0	7,078.2	7,198.7	7,112.2	30.4	16.2	104.24	-321.1	-1,191.3	318.7	292.3	26.36	12.090		
7,316.6	7,090.2	7,209.1	7,122.4	30.5	16.2	105.07	-321.9	-1,193.2	318.5	291.9	26.55	11.997		
7,350.0	7,113.3	7,228.5	7,141.5	30.5	16.3	106.63	-323.4	-1,196.6	319.5	292.6	26.84	11.902		
7,400.0	7,145.3	7,254.0	7,166.6	30.5	16.4	108.49	-325.4	-1,200.9	325.3	298.2	27.08	12.009		
7,450.0	7,174.0	7,278.1	7,190.3	30.5	16.4	109.99	-327.2	-1,204.6	336.5	309.4	27.12	12.405		
7,500.0	7,199.1	7,298.8	7,210.7	30.6	16.5	110.66	-328.6	-1,207.6	353.2	326.2	26.99	13.086		
7,550.0	7,220.5	7,316.0	7,227.7	30.6	16.6	110.37	-329.7	-1,210.0	375.2	348.4	26.80	14.002		
7,600.0	7,238.0	7,329.3	7,240.9	30.6	16.6	108.94	-330.5	-1,211.8	402.0	375.4	26.66	15.078		
7,650.0	7,251.5	7,339.0	7,250.4	30.7	16.6	106.31	-331.1	-1,213.1	432.9	406.2	26.67	16.232		
7,700.0	7,260.8	7,344.8	7,256.2	30.7	16.6	102.40	-331.5	-1,213.8	467.1	440.3	26.82	17.419		
7,750.0	7,265.9	7,347.0	7,258.4	30.8	16.6	97.24	-331.6	-1,214.1	503.9	476.9	27.01	18.659		
7,785.5	7,267.0	7,347.0	7,258.4	30.9	16.6	93.00	-331.6	-1,214.1	531.2	504.1	27.08	19.617		
7,800.0	7,267.0	7,345.0	7,256.4	30.9	16.6	92.66	-331.5	-1,213.8	542.5	515.4	27.12	20.002		
7,900.0	7,267.0	7,339.5	7,251.0	31.1	16.6	91.72	-331.2	-1,213.1	624.5	596.8	27.62	22.611		
8,000.0	7,267.0	7,334.0	7,245.5	31.4	16.6	90.78	-330.8	-1,212.4	711.0	682.7	28.30	25.126		
8,100.0	7,267.0	7,328.4	7,240.0	31.8	16.6	89.83	-330.5	-1,211.7	800.6	771.5	29.14	27.478		
8,200.0	7,267.0	7,322.8	7,234.5	32.3	16.6	88.88	-330.1	-1,211.0	892.4	862.3	30.11	29.638		
8,300.0	7,267.0	7,316.0	7,227.7	32.9	16.6	87.74	-329.7	-1,210.0	985.7	954.5	31.18	31.613		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 44-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 642-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	-100.20	-111.8	-621.3	631.8					
100.0	100.0	74.0	74.0	0.1	0.1	-100.20	-111.8	-621.3	631.3	631.0	0.25	2,509.967		
200.0	200.0	174.0	174.0	0.3	0.3	-100.20	-111.8	-621.3	631.3	630.7	0.60	1,051.169		
300.0	300.0	274.0	274.0	0.5	0.5	8.94	-111.8	-621.3	629.5	628.6	0.95	663.165		
400.0	399.8	373.8	373.8	0.7	0.7	9.04	-111.8	-621.3	624.4	623.1	1.30	481.270		
500.0	499.5	473.5	473.5	0.9	0.8	9.19	-111.8	-621.3	615.8	614.1	1.64	374.451		
600.0	598.7	572.7	572.7	1.2	1.0	9.41	-111.8	-621.3	603.7	601.7	1.99	303.304		
700.0	697.5	672.8	672.8	1.5	1.2	9.75	-111.5	-621.3	588.3	585.9	2.34	251.583		
800.0	795.6	770.4	770.4	1.9	1.3	10.33	-109.7	-621.4	569.3	566.6	2.68	212.078		
884.5	878.0	852.4	852.4	2.2	1.5	10.91	-108.1	-621.6	550.7	547.7	2.98	184.924		
900.0	893.1	867.4	867.4	2.3	1.5	11.02	-107.9	-621.6	547.1	544.1	3.03	180.331		
1,000.0	990.2	964.1	964.0	2.7	1.7	11.73	-105.9	-621.9	523.9	520.5	3.40	154.199		
1,100.0	1,087.4	1,059.2	1,059.1	3.2	1.9	12.51	-103.9	-622.3	500.9	497.2	3.77	133.028		
1,200.0	1,184.5	1,154.3	1,154.2	3.6	2.0	13.37	-101.8	-623.2	478.5	474.3	4.14	115.546		
1,300.0	1,281.7	1,249.6	1,249.5	4.1	2.2	14.34	-99.6	-624.5	456.6	452.0	4.53	100.885		
1,400.0	1,378.9	1,349.4	1,349.2	4.5	2.4	15.44	-97.5	-626.0	434.9	430.0	4.93	88.307		
1,500.0	1,476.0	1,451.4	1,451.2	5.0	2.5	16.49	-96.5	-626.3	412.4	407.1	5.34	77.299		
1,600.0	1,573.2	1,553.1	1,552.9	5.4	2.7	17.46	-96.9	-625.4	388.8	383.1	5.75	67.607		
1,700.0	1,670.3	1,647.8	1,647.6	5.9	2.9	18.41	-97.7	-623.9	364.7	358.5	6.17	59.142		
1,800.0	1,767.5	1,745.4	1,745.2	6.3	3.1	20.06	-95.4	-623.5	341.9	335.2	6.63	51.545		
1,900.0	1,864.7	1,849.8	1,849.5	6.8	3.2	22.23	-92.3	-621.0	317.5	310.4	7.16	44.358		
2,000.0	1,961.8	1,945.7	1,945.3	7.2	3.4	24.43	-90.1	-617.4	292.1	284.4	7.69	37.974		
2,100.0	2,059.0	2,040.5	2,040.1	7.7	3.6	26.45	-90.5	-614.7	267.8	259.6	8.24	32.511		
2,200.0	2,156.1	2,136.1	2,135.6	8.1	3.7	28.84	-90.9	-612.4	244.3	235.5	8.84	27.653		
2,300.0	2,253.3	2,232.0	2,231.5	8.6	3.9	31.75	-91.2	-610.4	221.7	212.2	9.50	23.327		
2,400.0	2,350.4	2,328.0	2,327.5	9.1	4.1	35.31	-91.3	-608.8	200.1	189.8	10.26	19.499		
2,500.0	2,447.6	2,424.2	2,423.7	9.5	4.3	39.73	-91.3	-607.4	179.8	168.6	11.13	16.153		
2,600.0	2,544.8	2,520.7	2,520.2	10.0	4.4	45.26	-91.0	-606.2	161.1	149.0	12.14	13.274		
2,700.0	2,641.9	2,617.2	2,616.6	10.4	4.6	52.26	-90.2	-605.0	144.5	131.2	13.29	10.876		
2,800.0	2,739.1	2,713.6	2,713.0	10.9	4.8	60.96	-89.0	-603.8	130.9	116.4	14.54	9.003		
2,900.0	2,836.2	2,813.2	2,812.6	11.3	4.9	71.63	-88.1	-602.3	120.7	104.9	15.81	7.640		
3,000.0	2,933.4	2,911.1	2,910.5	11.8	5.1	83.33	-89.9	-599.9	112.5	95.7	16.84	6.682		
3,090.5	3,021.3	2,998.0	2,997.4	12.2	5.3	94.52	-91.3	-598.1	109.9	92.5	17.43	6.307 CC		
3,100.0	3,030.6	3,007.2	3,006.5	12.3	5.3	95.70	-91.5	-598.0	110.0	92.5	17.47	6.294 ES, SF		
3,200.0	3,127.7	3,103.5	3,102.8	12.7	5.4	107.76	-92.6	-596.7	113.5	95.9	17.64	6.435		
3,300.0	3,224.9	3,200.3	3,199.7	13.2	5.6	118.45	-93.4	-595.9	122.3	104.9	17.47	7.004		
3,400.0	3,322.0	3,297.5	3,296.8	13.6	5.8	127.30	-94.0	-595.7	134.9	117.8	17.13	7.874		
3,500.0	3,419.2	3,394.8	3,394.2	14.1	5.9	134.38	-94.6	-595.9	150.1	133.3	16.80	8.934		
3,600.0	3,516.4	3,492.2	3,491.5	14.5	6.1	139.95	-94.9	-596.7	167.0	150.4	16.54	10.099		
3,700.0	3,613.5	3,589.4	3,588.7	15.0	6.3	144.29	-94.9	-597.9	185.2	168.8	16.38	11.311		
3,800.0	3,710.7	3,686.8	3,686.1	15.5	6.4	147.68	-94.4	-599.6	204.4	188.0	16.32	12.525		
3,900.0	3,807.8	3,784.0	3,783.3	15.9	6.6	150.38	-93.7	-601.5	224.1	207.8	16.33	13.720		
4,000.0	3,905.0	3,880.6	3,879.8	16.4	6.8	153.21	-94.3	-601.4	244.6	228.3	16.31	14.999		
4,100.0	4,002.2	3,978.1	3,977.4	16.8	7.0	155.78	-95.5	-600.8	265.7	249.4	16.32	16.287		
4,200.0	4,099.3	4,075.8	4,075.0	17.3	7.1	157.97	-96.8	-600.4	287.1	270.7	16.37	17.534		
4,300.0	4,196.5	4,173.5	4,172.7	17.7	7.3	159.84	-98.1	-600.1	308.6	292.1	16.47	18.732		
4,400.0	4,293.6	4,270.9	4,270.1	18.2	7.5	161.41	-99.3	-600.1	330.3	313.7	16.62	19.874		
4,500.0	4,390.8	4,368.4	4,367.6	18.7	7.6	162.73	-100.2	-600.4	352.1	335.3	16.80	20.958		
4,600.0	4,487.9	4,466.0	4,465.2	19.1	7.8	163.83	-100.8	-601.0	374.0	357.0	17.01	21.983		
4,700.0	4,585.1	4,563.3	4,562.5	19.6	8.0	164.77	-101.2	-601.7	396.0	378.7	17.25	22.958		
4,800.0	4,682.3	4,660.6	4,659.9	20.0	8.1	165.60	-101.5	-602.5	418.1	400.6	17.50	23.893		
4,900.0	4,779.4	4,758.0	4,757.2	20.5	8.3	166.35	-101.9	-603.2	440.2	422.5	17.76	24.789		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 44-17J (EXISTING) - ENCANA - SURVEYS											Offset Site Error:		0.0 ft
Survey Program: 642-Geolink MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
5,000.0	4,876.6	4,854.3	4,853.5	20.9	8.5	167.00	-102.1	-604.0	462.6	444.5	18.03	25.653	
5,100.0	4,973.7	4,942.0	4,941.2	21.4	8.6	167.55	-102.1	-604.4	485.4	467.1	18.30	26.521	
5,200.0	5,070.9	5,014.1	5,013.2	21.9	8.8	168.19	-102.2	-601.0	512.3	493.8	18.53	27.648	
5,300.0	5,168.1	5,088.6	5,087.4	22.3	8.9	169.07	-102.7	-593.5	543.6	524.8	18.73	29.021	
5,400.0	5,265.2	5,173.1	5,170.9	22.8	9.1	170.33	-105.4	-581.6	577.3	558.4	18.90	30.545	
5,500.0	5,362.4	5,256.5	5,252.9	23.2	9.2	171.73	-109.7	-567.4	613.0	593.9	19.07	32.147	
5,600.0	5,459.5	5,333.5	5,328.1	23.7	9.4	173.25	-116.7	-551.7	650.5	631.2	19.24	33.814	
5,700.0	5,556.7	5,404.3	5,396.2	24.1	9.6	174.76	-124.6	-534.3	691.1	671.6	19.42	35.579	
5,800.0	5,653.9	5,481.0	5,469.5	24.6	9.8	176.39	-134.3	-513.9	733.7	714.1	19.65	37.345	
5,900.0	5,751.0	5,546.0	5,531.0	25.1	10.0	177.74	-142.7	-494.5	779.5	759.6	19.90	39.172	
6,000.0	5,848.2	5,610.2	5,591.4	25.5	10.2	178.94	-150.4	-474.1	827.8	807.6	20.18	41.022	
6,100.0	5,945.3	5,660.0	5,637.6	26.0	10.3	179.85	-156.2	-456.6	879.5	859.1	20.45	43.000	
6,200.0	6,042.5	5,713.9	5,686.7	26.4	10.6	-179.16	-162.9	-435.4	934.8	914.1	20.76	45.037	
6,300.0	6,139.6	5,782.0	5,748.1	26.9	10.9	-177.94	-172.0	-407.5	992.0	970.9	21.12	46.969	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 5000-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	-123.33	-358.4	-545.0	652.7					
100.0	100.0	77.0	77.0	0.1	0.1	-123.33	-358.4	-545.0	652.3	652.0	0.26	2,540.393		
200.0	200.0	177.0	177.0	0.3	0.3	-123.33	-358.4	-545.0	652.3	651.7	0.61	1,076.673		
300.0	300.0	277.0	277.0	0.5	0.5	-14.26	-358.4	-545.0	650.6	649.6	0.95	681.403		
400.0	399.8	376.8	376.8	0.7	0.7	-14.40	-358.4	-545.0	645.5	644.2	1.30	495.136		
500.0	499.5	476.5	476.5	0.9	0.8	-14.64	-358.4	-545.0	637.1	635.4	1.65	385.380		
600.0	598.7	575.7	575.7	1.2	1.0	-14.98	-358.4	-545.0	625.3	623.3	2.00	312.058		
700.0	697.5	674.5	674.5	1.5	1.2	-15.44	-358.4	-545.0	610.2	607.8	2.36	258.887		
800.0	795.6	772.6	772.6	1.9	1.3	-16.04	-358.4	-545.0	591.8	589.1	2.71	217.991		
884.5	878.0	855.0	855.0	2.2	1.5	-16.66	-358.4	-545.0	573.7	570.7	3.02	189.800		
900.0	893.1	870.1	870.1	2.3	1.5	-16.77	-358.4	-545.0	570.2	567.1	3.08	185.053		
1,000.0	990.2	967.2	967.2	2.7	1.7	-17.48	-358.4	-545.0	547.5	544.1	3.46	158.081		
1,100.0	1,087.4	1,064.4	1,064.4	3.2	1.9	-18.25	-358.4	-545.0	524.9	521.1	3.85	136.210		
1,200.0	1,184.5	1,161.5	1,161.5	3.6	2.0	-19.10	-358.4	-545.0	502.5	498.2	4.25	118.135		
1,300.0	1,281.7	1,258.7	1,258.7	4.1	2.2	-20.02	-358.4	-545.0	480.1	475.4	4.66	102.958		
1,400.0	1,378.9	1,355.9	1,355.9	4.5	2.4	-21.03	-358.4	-545.0	457.8	452.8	5.08	90.046		
1,500.0	1,476.0	1,453.0	1,453.0	5.0	2.5	-22.14	-358.4	-545.0	435.7	430.2	5.52	78.937		
1,600.0	1,573.2	1,550.2	1,550.2	5.4	2.7	-23.37	-358.4	-545.0	413.8	407.9	5.97	69.290		
1,700.0	1,670.3	1,647.3	1,647.3	5.9	2.9	-24.73	-358.4	-545.0	392.1	385.7	6.44	60.847		
1,800.0	1,767.5	1,744.5	1,744.5	6.3	3.0	-26.26	-358.4	-545.0	370.6	363.7	6.94	53.411		
1,900.0	1,864.7	1,841.7	1,841.7	6.8	3.2	-27.96	-358.4	-545.0	349.4	342.0	7.46	46.829		
2,000.0	1,961.8	1,938.8	1,938.8	7.2	3.4	-29.89	-358.4	-545.0	328.6	320.6	8.02	40.983		
2,100.0	2,059.0	2,036.0	2,036.0	7.7	3.6	-32.06	-358.4	-545.0	308.1	299.5	8.61	35.779		
2,200.0	2,156.1	2,133.1	2,133.1	8.1	3.7	-34.54	-358.4	-545.0	288.2	278.9	9.25	31.145		
2,300.0	2,253.3	2,230.3	2,230.3	8.6	3.9	-37.37	-358.4	-545.0	268.8	258.9	9.95	27.026		
2,400.0	2,350.4	2,327.4	2,327.4	9.1	4.1	-40.62	-358.4	-545.0	250.2	239.5	10.70	23.380		
2,500.0	2,447.6	2,424.6	2,424.6	9.5	4.2	-44.37	-358.4	-545.0	232.5	221.0	11.53	20.175		
2,600.0	2,544.8	2,521.8	2,521.8	10.0	4.4	-48.69	-358.4	-545.0	216.0	203.6	12.42	17.389		
2,700.0	2,641.9	2,618.9	2,618.9	10.4	4.6	-53.67	-358.4	-545.0	200.9	187.5	13.39	15.008		
2,800.0	2,739.1	2,716.1	2,716.1	10.9	4.7	-59.39	-358.4	-545.0	187.6	173.2	14.40	13.022		
2,900.0	2,836.2	2,813.2	2,813.2	11.3	4.9	-65.86	-358.4	-545.0	176.4	161.0	15.44	11.423		
3,000.0	2,933.4	2,910.4	2,910.4	11.8	5.1	-73.06	-358.4	-545.0	167.9	151.4	16.46	10.201		
3,100.0	3,030.6	3,007.6	3,007.6	12.3	5.2	-80.85	-358.4	-545.0	162.4	145.0	17.37	9.346		
3,200.0	3,127.7	3,104.7	3,104.7	12.7	5.4	-89.00	-358.4	-545.0	160.2	142.1	18.13	8.839		
3,212.2	3,139.6	3,116.6	3,116.6	12.8	5.4	-90.00	-358.4	-545.0	160.2	142.0	18.20	8.800 CC, ES		
3,300.0	3,224.9	3,201.9	3,201.9	13.2	5.6	-97.18	-358.4	-545.0	161.5	142.9	18.67	8.652 SF		
3,400.0	3,322.0	3,299.0	3,299.0	13.6	5.8	-105.09	-358.4	-545.0	166.2	147.2	18.99	8.752		
3,500.0	3,419.2	3,396.2	3,396.2	14.1	5.9	-112.45	-358.4	-545.0	174.1	154.9	19.13	9.099		
3,600.0	3,516.4	3,493.4	3,493.4	14.5	6.1	-119.10	-358.4	-545.0	184.6	165.5	19.13	9.650		
3,700.0	3,613.5	3,590.5	3,590.5	15.0	6.3	-125.00	-358.4	-545.0	197.5	178.4	19.05	10.363		
3,800.0	3,710.7	3,687.7	3,687.7	15.5	6.4	-130.16	-358.4	-545.0	212.2	193.2	18.94	11.201		
3,900.0	3,807.8	3,784.8	3,784.8	15.9	6.6	-134.63	-358.4	-545.0	228.4	209.6	18.83	12.129		
4,000.0	3,905.0	3,882.0	3,882.0	16.4	6.8	-138.51	-358.4	-545.0	245.8	227.1	18.74	13.120		
4,100.0	4,002.2	3,979.2	3,979.2	16.8	6.9	-141.88	-358.4	-545.0	264.2	245.5	18.67	14.151		
4,200.0	4,099.3	4,076.3	4,076.3	17.3	7.1	-144.81	-358.4	-545.0	283.4	264.8	18.64	15.203		
4,300.0	4,196.5	4,173.5	4,173.5	17.7	7.3	-147.36	-358.4	-545.0	303.2	284.6	18.65	16.262		
4,400.0	4,293.6	4,270.6	4,270.6	18.2	7.5	-149.61	-358.4	-545.0	323.6	304.9	18.68	17.317		
4,500.0	4,390.8	4,367.8	4,367.8	18.7	7.6	-151.59	-358.4	-545.0	344.3	325.6	18.75	18.361		
4,600.0	4,487.9	4,464.9	4,464.9	19.1	7.8	-153.34	-358.4	-545.0	365.4	346.6	18.85	19.387		
4,700.0	4,585.1	4,562.1	4,562.1	19.6	8.0	-154.91	-358.4	-545.0	386.8	367.9	18.97	20.391		
4,800.0	4,682.3	4,659.3	4,659.3	20.0	8.1	-156.31	-358.4	-545.0	408.5	389.4	19.12	21.370		
4,900.0	4,779.4	4,756.4	4,756.4	20.5	8.3	-157.57	-358.4	-545.0	430.4	411.1	19.28	22.323		

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 Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 5000-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,000.0	4,876.6	4,853.6	4,853.6	20.9	8.5	-158.71	-358.4	-545.0	452.4	433.0	19.46	23.248		
5,100.0	4,973.7	4,950.7	4,950.7	21.4	8.6	-159.74	-358.4	-545.0	474.6	455.0	19.66	24.146		
5,200.0	5,070.9	5,000.0	5,000.0	21.9	8.7	-160.23	-358.4	-545.0	499.3	479.4	19.87	25.122		
5,300.0	5,168.1	5,000.0	5,000.0	22.3	8.7	-160.23	-358.4	-545.0	539.3	519.2	20.10	26.831		
5,400.0	5,265.2	5,000.0	5,000.0	22.8	8.7	-160.23	-358.4	-545.0	593.7	573.3	20.33	29.206		
5,500.0	5,362.4	5,000.0	5,000.0	23.2	8.7	-160.23	-358.4	-545.0	658.8	638.2	20.55	32.053		
5,600.0	5,459.5	5,000.0	5,000.0	23.7	8.7	-160.23	-358.4	-545.0	731.8	711.1	20.78	35.219		
5,700.0	5,556.7	5,000.0	5,000.0	24.1	8.7	-160.23	-358.4	-545.0	810.7	789.7	21.01	38.592		
5,800.0	5,653.9	5,000.0	5,000.0	24.6	8.7	-160.23	-358.4	-545.0	893.7	872.5	21.23	42.093		
5,900.0	5,751.0	5,000.0	5,000.0	25.1	8.7	-160.23	-358.4	-545.0	980.0	958.5	21.46	45.667		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 5050-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	121.69	-159.2	257.8	303.6					
100.0	100.0	80.0	80.0	0.1	0.1	121.69	-159.2	257.8	303.0	0.26	1,156.444			
200.0	200.0	180.0	180.0	0.3	0.3	121.69	-159.2	257.8	303.0	0.61	495.835 CC, ES			
300.0	300.0	280.0	280.0	0.5	0.5	-129.43	-159.2	257.8	304.1	0.96	316.006			
400.0	399.8	379.8	379.8	0.7	0.7	-130.13	-159.2	257.8	307.4	1.32	232.350			
500.0	499.5	479.5	479.5	0.9	0.8	-131.26	-159.2	257.8	313.1	1.70	184.162			
600.0	598.7	578.7	578.7	1.2	1.0	-132.76	-159.2	257.8	321.3	2.10	153.207			
700.0	697.5	677.5	677.5	1.5	1.2	-134.58	-159.2	257.8	332.2	2.51	132.116			
800.0	795.6	775.6	775.6	1.9	1.4	-136.62	-159.2	257.8	346.0	2.95	117.312			
884.5	878.0	858.0	858.0	2.2	1.5	-138.46	-159.2	257.8	360.0	3.33	108.265			
900.0	893.1	873.1	873.1	2.3	1.5	-138.84	-159.2	257.8	362.8	3.39	106.905			
1,000.0	990.2	970.2	970.2	2.7	1.7	-141.16	-159.2	257.8	381.1	3.83	99.555			
1,100.0	1,087.4	1,067.4	1,067.4	3.2	1.9	-143.26	-159.2	257.8	400.0	4.25	94.098			
1,200.0	1,184.5	1,164.5	1,164.5	3.6	2.0	-145.18	-159.2	257.8	419.4	4.66	89.956			
1,300.0	1,281.7	1,261.7	1,261.7	4.1	2.2	-146.93	-159.2	257.8	439.2	5.06	86.749			
1,400.0	1,378.9	1,358.9	1,358.9	4.5	2.4	-148.53	-159.2	257.8	459.4	5.45	84.226			
1,500.0	1,476.0	1,456.0	1,456.0	5.0	2.5	-149.99	-159.2	257.8	479.9	5.84	82.213			
1,600.0	1,573.2	1,553.2	1,553.2	5.4	2.7	-151.34	-159.2	257.8	500.7	6.21	80.587			
1,700.0	1,670.3	1,650.3	1,650.3	5.9	2.9	-152.58	-159.2	257.8	521.7	6.58	79.260			
1,800.0	1,767.5	1,747.5	1,747.5	6.3	3.1	-153.72	-159.2	257.8	542.9	6.95	78.166			
1,900.0	1,864.7	1,844.7	1,844.7	6.8	3.2	-154.78	-159.2	257.8	564.4	7.30	77.257			
2,000.0	1,961.8	1,941.8	1,941.8	7.2	3.4	-155.76	-159.2	257.8	586.0	7.66	76.496			
2,100.0	2,059.0	2,039.0	2,039.0	7.7	3.6	-156.67	-159.2	257.8	607.7	8.01	75.854			
2,200.0	2,156.1	2,136.1	2,136.1	8.1	3.7	-157.52	-159.2	257.8	629.6	8.36	75.308			
2,300.0	2,253.3	2,233.3	2,233.3	8.6	3.9	-158.32	-159.2	257.8	651.6	8.71	74.843			
2,400.0	2,350.4	2,330.4	2,330.4	9.1	4.1	-159.06	-159.2	257.8	673.8	9.05	74.442			
2,500.0	2,447.6	2,427.6	2,427.6	9.5	4.2	-159.75	-159.2	257.8	696.0	9.39	74.096			
2,600.0	2,544.8	2,524.8	2,524.8	10.0	4.4	-160.40	-159.2	257.8	718.3	9.73	73.796			
2,700.0	2,641.9	2,621.9	2,621.9	10.4	4.6	-161.01	-159.2	257.8	740.7	10.07	73.534			
2,800.0	2,739.1	2,719.1	2,719.1	10.9	4.7	-161.59	-159.2	257.8	763.2	10.41	73.304			
2,900.0	2,836.2	2,816.2	2,816.2	11.3	4.9	-162.13	-159.2	257.8	785.8	10.75	73.101			
3,000.0	2,933.4	2,913.4	2,913.4	11.8	5.1	-162.65	-159.2	257.8	808.4	11.09	72.922			
3,100.0	3,030.6	3,010.6	3,010.6	12.3	5.3	-163.13	-159.2	257.8	831.1	11.42	72.762			
3,200.0	3,127.7	3,107.7	3,107.7	12.7	5.4	-163.59	-159.2	257.8	853.8	11.76	72.620			
3,300.0	3,224.9	3,204.9	3,204.9	13.2	5.6	-164.03	-159.2	257.8	876.6	12.09	72.492			
3,400.0	3,322.0	3,302.0	3,302.0	13.6	5.8	-164.44	-159.2	257.8	899.4	12.43	72.377			
3,500.0	3,419.2	3,399.2	3,399.2	14.1	5.9	-164.84	-159.2	257.8	922.3	12.76	72.273			
3,600.0	3,516.4	3,496.4	3,496.4	14.5	6.1	-165.21	-159.2	257.8	945.2	13.09	72.179			
3,700.0	3,613.5	3,593.5	3,593.5	15.0	6.3	-165.57	-159.2	257.8	968.1	13.43	72.093			
3,800.0	3,710.7	3,690.7	3,690.7	15.5	6.4	-165.91	-159.2	257.8	991.1	13.76	72.014 SF			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4A-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4A-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4983.0ft

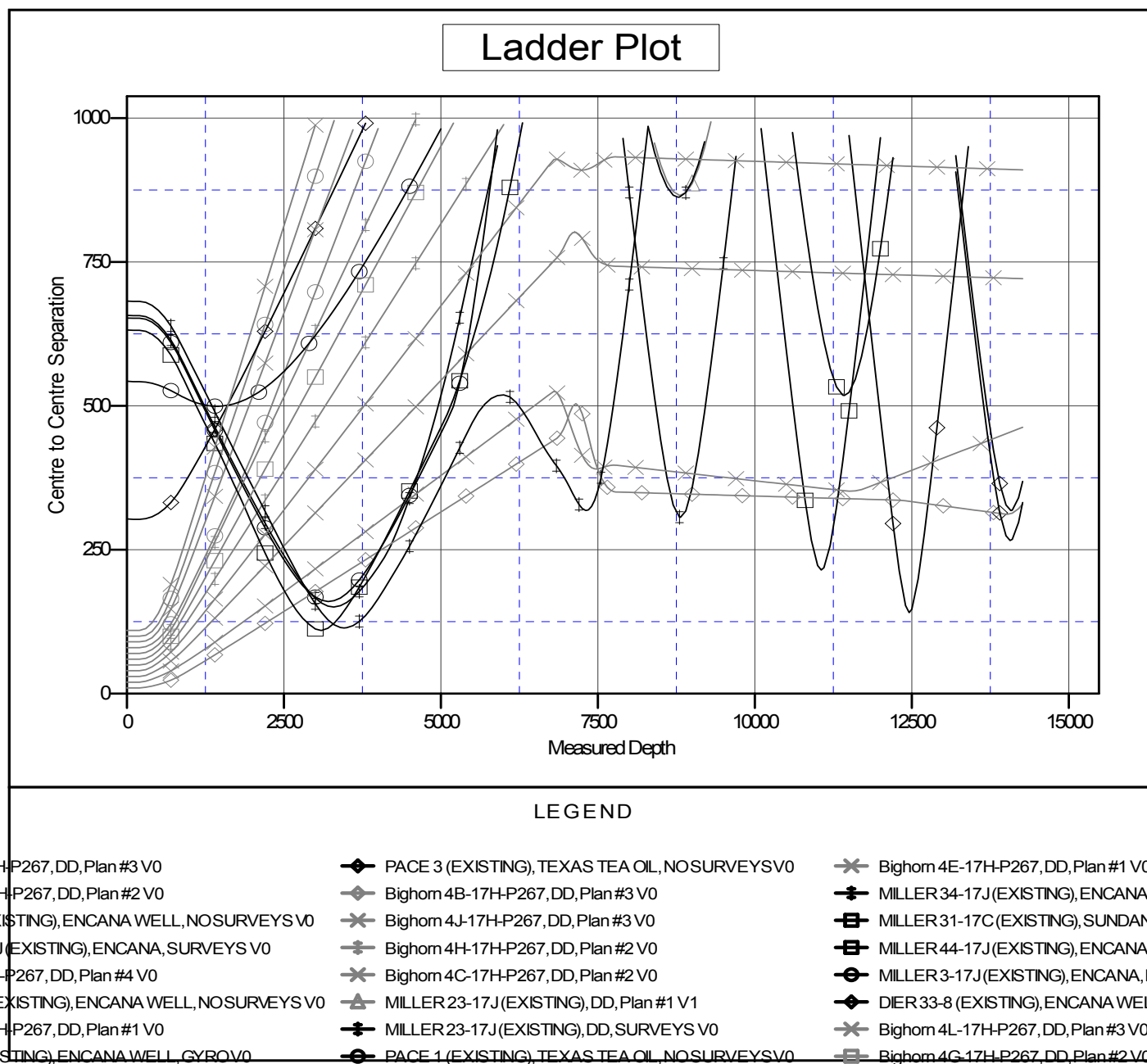
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Bighorn 4A-17H-P267

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.38°



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