



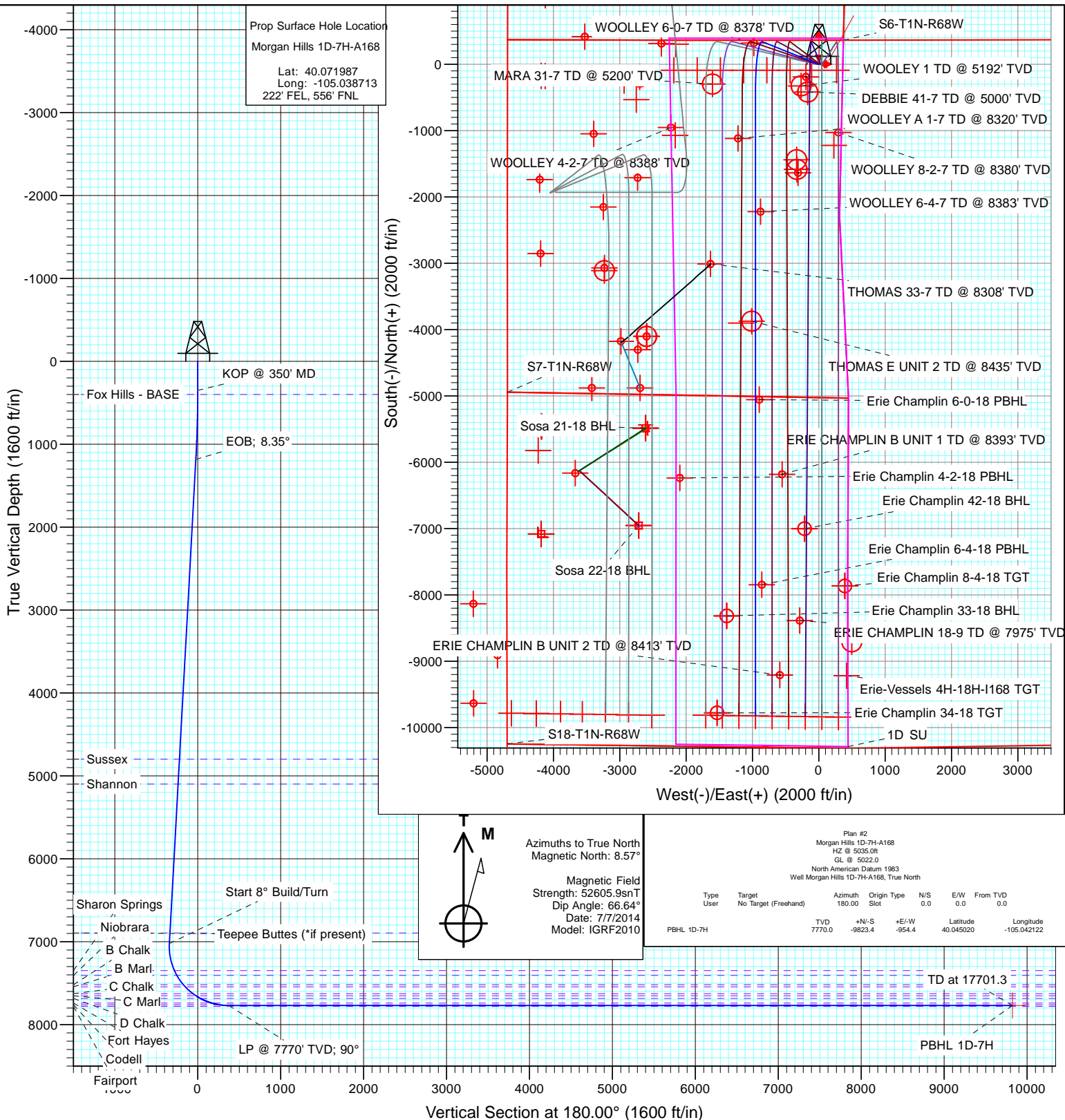
Project: DJ Wattenberg
Site: S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)
Well: Morgan Hills 1D-7H-A168
Wellbore: HZ
Design: Plan #2



Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	350.0	0.00	0.00	350.0	0.0	0.0	0.00	0.00	0.0	
3	1185.5	8.35	291.84	1182.5	22.6	-56.4	1.00	291.84	-22.6	
4	7087.6	8.35	291.84	7022.0	341.7	-852.5	0.00	0.00	-341.7	
5	8251.3	90.00	180.00	7770.0	-373.4	-954.4	8.00	-111.63	373.4	
6	17701.3	90.00	180.00	7770.0	-9823.4	-954.4	0.00	0.00	9823.4	PBHL 1D-7H

Annotation

KOP @ 350' MD
EOB; 8.35°
Start 8° Build/Turn
LP @ 7770' TVD; 90°
TD at 17701.3



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	HZ @ 5035.0ft
Project:	DJ Wattenberg	MD Reference:	HZ @ 5035.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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

Site		S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)			
Site Position:		Northing:	1,265,219.42 ft	Latitude:	40.060530
From:	Lat/Long	Easting:	3,126,139.27 ft	Longitude:	-105.049370
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.29 °

Well	Morgan Hills 1D-7H-A168					
Well Position	+N/-S	0.0 ft	Northing:	1,269,408.22 ft	Latitude:	40.071987
	+E/-W	0.0 ft	Easting:	3,129,100.47 ft	Longitude:	-105.038713
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	5,022.0 ft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	7/7/2014	8.57	66.64	52,606

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	180.00

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
350.0	0.00	0.00	350.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,185.5	8.35	291.84	1,182.5	22.6	-56.4	1.00	1.00	0.00	291.84	
7,087.6	8.35	291.84	7,022.0	341.7	-852.5	0.00	0.00	0.00	0.00	
8,251.3	90.00	180.00	7,770.0	-373.4	-954.4	8.00	7.02	-9.61	-111.63	
17,701.3	90.00	180.00	7,770.0	-9,823.4	-954.4	0.00	0.00	0.00	0.00	PBHL 1D-7H

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	HZ @ 5035.0ft
Project:	DJ Wattenberg	MD Reference:	HZ @ 5035.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	0.00	KOP @ 350' MD
400.0	0.50	291.84	400.0	0.1	-0.2	-0.1	1.00	1.00	Fox Hills - BASE
500.0	1.50	291.84	500.0	0.7	-1.8	-0.7	1.00	1.00	
600.0	2.50	291.84	599.9	2.0	-5.1	-2.0	1.00	1.00	
700.0	3.50	291.84	699.8	4.0	-9.9	-4.0	1.00	1.00	
800.0	4.50	291.84	799.5	6.6	-16.4	-6.6	1.00	1.00	
900.0	5.50	291.84	899.2	9.8	-24.5	-9.8	1.00	1.00	
1,000.0	6.50	291.84	998.6	13.7	-34.2	-13.7	1.00	1.00	
1,100.0	7.50	291.84	1,097.9	18.2	-45.5	-18.2	1.00	1.00	
1,185.5	8.35	291.84	1,182.5	22.6	-56.4	-22.6	1.00	1.00	EOB; 8.35°
1,200.0	8.35	291.84	1,196.9	23.4	-58.4	-23.4	0.00	0.00	
1,300.0	8.35	291.84	1,295.8	28.8	-71.9	-28.8	0.00	0.00	
1,400.0	8.35	291.84	1,394.8	34.2	-85.4	-34.2	0.00	0.00	
1,500.0	8.35	291.84	1,493.7	39.6	-98.9	-39.6	0.00	0.00	
1,600.0	8.35	291.84	1,592.6	45.0	-112.3	-45.0	0.00	0.00	
1,700.0	8.35	291.84	1,691.6	50.4	-125.8	-50.4	0.00	0.00	
1,800.0	8.35	291.84	1,790.5	55.8	-139.3	-55.8	0.00	0.00	
1,900.0	8.35	291.84	1,889.5	61.3	-152.8	-61.3	0.00	0.00	
2,000.0	8.35	291.84	1,988.4	66.7	-166.3	-66.7	0.00	0.00	
2,100.0	8.35	291.84	2,087.3	72.1	-179.8	-72.1	0.00	0.00	
2,200.0	8.35	291.84	2,186.3	77.5	-193.3	-77.5	0.00	0.00	
2,300.0	8.35	291.84	2,285.2	82.9	-206.8	-82.9	0.00	0.00	
2,400.0	8.35	291.84	2,384.2	88.3	-220.2	-88.3	0.00	0.00	
2,500.0	8.35	291.84	2,483.1	93.7	-233.7	-93.7	0.00	0.00	
2,600.0	8.35	291.84	2,582.0	99.1	-247.2	-99.1	0.00	0.00	
2,700.0	8.35	291.84	2,681.0	104.5	-260.7	-104.5	0.00	0.00	
2,800.0	8.35	291.84	2,779.9	109.9	-274.2	-109.9	0.00	0.00	
2,900.0	8.35	291.84	2,878.8	115.3	-287.7	-115.3	0.00	0.00	
3,000.0	8.35	291.84	2,977.8	120.7	-301.2	-120.7	0.00	0.00	
3,100.0	8.35	291.84	3,076.7	126.1	-314.6	-126.1	0.00	0.00	
3,200.0	8.35	291.84	3,175.7	131.5	-328.1	-131.5	0.00	0.00	
3,300.0	8.35	291.84	3,274.6	136.9	-341.6	-136.9	0.00	0.00	
3,400.0	8.35	291.84	3,373.5	142.4	-355.1	-142.4	0.00	0.00	
3,500.0	8.35	291.84	3,472.5	147.8	-368.6	-147.8	0.00	0.00	
3,600.0	8.35	291.84	3,571.4	153.2	-382.1	-153.2	0.00	0.00	
3,700.0	8.35	291.84	3,670.4	158.6	-395.6	-158.6	0.00	0.00	
3,800.0	8.35	291.84	3,769.3	164.0	-409.1	-164.0	0.00	0.00	
3,900.0	8.35	291.84	3,868.2	169.4	-422.5	-169.4	0.00	0.00	
4,000.0	8.35	291.84	3,967.2	174.8	-436.0	-174.8	0.00	0.00	
4,100.0	8.35	291.84	4,066.1	180.2	-449.5	-180.2	0.00	0.00	
4,200.0	8.35	291.84	4,165.1	185.6	-463.0	-185.6	0.00	0.00	
4,300.0	8.35	291.84	4,264.0	191.0	-476.5	-191.0	0.00	0.00	
4,400.0	8.35	291.84	4,362.9	196.4	-490.0	-196.4	0.00	0.00	
4,500.0	8.35	291.84	4,461.9	201.8	-503.5	-201.8	0.00	0.00	
4,600.0	8.35	291.84	4,560.8	207.2	-517.0	-207.2	0.00	0.00	
4,700.0	8.35	291.84	4,659.7	212.6	-530.4	-212.6	0.00	0.00	
4,800.0	8.35	291.84	4,758.7	218.0	-543.9	-218.0	0.00	0.00	
4,840.7	8.35	291.84	4,799.0	220.2	-549.4	-220.2	0.00	0.00	Sussex

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	HZ @ 5035.0ft
Project:	DJ Wattenberg	MD Reference:	HZ @ 5035.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,900.0	8.35	291.84	4,857.6	223.5	-557.4	-223.5	0.00	0.00	
5,000.0	8.35	291.84	4,956.6	228.9	-570.9	-228.9	0.00	0.00	
5,100.0	8.35	291.84	5,055.5	234.3	-584.4	-234.3	0.00	0.00	
5,144.0	8.35	291.84	5,099.0	236.6	-590.3	-236.6	0.00	0.00	Shannon
5,200.0	8.35	291.84	5,154.4	239.7	-597.9	-239.7	0.00	0.00	
5,300.0	8.35	291.84	5,253.4	245.1	-611.4	-245.1	0.00	0.00	
5,400.0	8.35	291.84	5,352.3	250.5	-624.8	-250.5	0.00	0.00	
5,500.0	8.35	291.84	5,451.3	255.9	-638.3	-255.9	0.00	0.00	
5,600.0	8.35	291.84	5,550.2	261.3	-651.8	-261.3	0.00	0.00	
5,700.0	8.35	291.84	5,649.1	266.7	-665.3	-266.7	0.00	0.00	
5,800.0	8.35	291.84	5,748.1	272.1	-678.8	-272.1	0.00	0.00	
5,900.0	8.35	291.84	5,847.0	277.5	-692.3	-277.5	0.00	0.00	
6,000.0	8.35	291.84	5,945.9	282.9	-705.8	-282.9	0.00	0.00	
6,100.0	8.35	291.84	6,044.9	288.3	-719.3	-288.3	0.00	0.00	
6,200.0	8.35	291.84	6,143.8	293.7	-732.7	-293.7	0.00	0.00	
6,300.0	8.35	291.84	6,242.8	299.1	-746.2	-299.1	0.00	0.00	
6,400.0	8.35	291.84	6,341.7	304.5	-759.7	-304.5	0.00	0.00	
6,500.0	8.35	291.84	6,440.6	310.0	-773.2	-310.0	0.00	0.00	
6,600.0	8.35	291.84	6,539.6	315.4	-786.7	-315.4	0.00	0.00	
6,700.0	8.35	291.84	6,638.5	320.8	-800.2	-320.8	0.00	0.00	
6,800.0	8.35	291.84	6,737.5	326.2	-813.7	-326.2	0.00	0.00	
6,900.0	8.35	291.84	6,836.4	331.6	-827.2	-331.6	0.00	0.00	
6,959.2	8.35	291.84	6,895.0	334.8	-835.1	-334.8	0.00	0.00	Teepee Buttes (*if present)
7,000.0	8.35	291.84	6,935.3	337.0	-840.6	-337.0	0.00	0.00	
7,087.6	8.35	291.84	7,022.0	341.7	-852.5	-341.7	0.00	0.00	Start 8° Build/Turn
7,100.0	8.04	285.24	7,034.3	342.3	-854.1	-342.3	8.00	-2.52	
7,150.0	7.99	256.25	7,083.8	342.4	-860.9	-342.4	8.00	-0.11	
7,200.0	9.74	232.61	7,133.2	339.0	-867.6	-339.0	8.00	3.49	
7,250.0	12.55	217.76	7,182.3	332.1	-874.3	-332.1	8.00	5.63	
7,300.0	15.88	208.64	7,230.8	321.8	-880.9	-321.8	8.00	6.65	
7,350.0	19.45	202.70	7,278.4	308.1	-887.4	-308.1	8.00	7.15	
7,400.0	23.16	198.58	7,325.0	291.1	-893.8	-291.1	8.00	7.42	
7,426.3	25.15	196.88	7,349.0	280.9	-897.0	-280.9	8.00	7.55	Sharon Springs
7,450.0	26.95	195.55	7,370.3	270.9	-899.9	-270.9	8.00	7.61	
7,491.8	30.16	193.56	7,407.0	251.5	-904.9	-251.5	8.00	7.67	Niobrara
7,500.0	30.79	193.22	7,414.0	247.5	-905.9	-247.5	8.00	7.71	
7,550.0	34.67	191.37	7,456.1	221.1	-911.6	-221.1	8.00	7.75	
7,600.0	38.56	189.85	7,496.2	191.8	-917.1	-191.8	8.00	7.79	
7,628.3	40.78	189.09	7,518.0	173.9	-920.1	-173.9	8.00	7.82	B Chalk
7,650.0	42.48	188.56	7,534.2	159.7	-922.3	-159.7	8.00	7.83	
7,663.4	43.52	188.25	7,544.0	150.7	-923.6	-150.7	8.00	7.84	B Marl
7,700.0	46.40	187.46	7,569.9	125.0	-927.1	-125.0	8.00	7.85	
7,750.0	50.33	186.49	7,603.1	88.0	-931.7	-88.0	8.00	7.87	
7,788.7	53.38	185.81	7,627.0	57.7	-934.9	-57.7	8.00	7.88	C Chalk
7,800.0	54.28	185.63	7,633.7	48.6	-935.8	-48.6	8.00	7.89	
7,834.2	56.97	185.08	7,653.0	20.5	-938.5	-20.5	8.00	7.89	C Marl
7,850.0	58.22	184.84	7,661.5	7.2	-939.6	-7.2	8.00	7.90	
7,895.1	61.78	184.19	7,684.0	-31.7	-942.7	31.7	8.00	7.90	D Chalk
7,900.0	62.17	184.13	7,686.3	-36.0	-943.0	36.0	8.00	7.91	
7,950.0	66.13	183.46	7,708.1	-80.9	-946.0	80.9	8.00	7.91	
8,000.0	70.09	182.83	7,726.8	-127.2	-948.5	127.2	8.00	7.91	
8,045.9	73.72	182.28	7,741.0	-170.8	-950.5	170.8	8.00	7.92	Fort Hayes

Planning Report

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Project:	DJ Wattenberg	MD Reference:	HZ @ 5035.0ft
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Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,050.0	74.04	182.23	7,742.1	-174.7	-950.6	174.7	8.00	7.92	
8,100.0	78.01	181.66	7,754.2	-223.2	-952.3	223.2	8.00	7.92	
8,137.1	80.95	181.24	7,761.0	-259.7	-953.2	259.7	8.00	7.92	Codell
8,150.0	81.97	181.10	7,762.9	-272.4	-953.4	272.4	8.00	7.93	
8,200.0	85.93	180.56	7,768.2	-322.1	-954.2	322.1	8.00	7.93	
8,251.3	90.00	180.00	7,770.0	-373.4	-954.4	373.4	8.00	7.93	LP @ 7770' TVD; 90°
8,300.0	90.00	180.00	7,770.0	-422.1	-954.4	422.1	0.00	0.00	
8,400.0	90.00	180.00	7,770.0	-522.1	-954.4	522.1	0.00	0.00	
8,500.0	90.00	180.00	7,770.0	-622.1	-954.4	622.1	0.00	0.00	
8,600.0	90.00	180.00	7,770.0	-722.1	-954.4	722.1	0.00	0.00	
8,700.0	90.00	180.00	7,770.0	-822.1	-954.4	822.1	0.00	0.00	
8,800.0	90.00	180.00	7,770.0	-922.1	-954.4	922.1	0.00	0.00	
8,900.0	90.00	180.00	7,770.0	-1,022.1	-954.4	1,022.1	0.00	0.00	
9,000.0	90.00	180.00	7,770.0	-1,122.1	-954.4	1,122.1	0.00	0.00	
9,100.0	90.00	180.00	7,770.0	-1,222.1	-954.4	1,222.1	0.00	0.00	
9,200.0	90.00	180.00	7,770.0	-1,322.1	-954.4	1,322.1	0.00	0.00	
9,300.0	90.00	180.00	7,770.0	-1,422.1	-954.4	1,422.1	0.00	0.00	
9,400.0	90.00	180.00	7,770.0	-1,522.1	-954.4	1,522.1	0.00	0.00	
9,500.0	90.00	180.00	7,770.0	-1,622.1	-954.4	1,622.1	0.00	0.00	
9,600.0	90.00	180.00	7,770.0	-1,722.1	-954.4	1,722.1	0.00	0.00	
9,700.0	90.00	180.00	7,770.0	-1,822.1	-954.4	1,822.1	0.00	0.00	
9,800.0	90.00	180.00	7,770.0	-1,922.1	-954.4	1,922.1	0.00	0.00	
9,900.0	90.00	180.00	7,770.0	-2,022.1	-954.4	2,022.1	0.00	0.00	
10,000.0	90.00	180.00	7,770.0	-2,122.1	-954.4	2,122.1	0.00	0.00	
10,100.0	90.00	180.00	7,770.0	-2,222.1	-954.4	2,222.1	0.00	0.00	
10,200.0	90.00	180.00	7,770.0	-2,322.1	-954.4	2,322.1	0.00	0.00	
10,300.0	90.00	180.00	7,770.0	-2,422.1	-954.4	2,422.1	0.00	0.00	
10,400.0	90.00	180.00	7,770.0	-2,522.1	-954.4	2,522.1	0.00	0.00	
10,500.0	90.00	180.00	7,770.0	-2,622.1	-954.4	2,622.1	0.00	0.00	
10,600.0	90.00	180.00	7,770.0	-2,722.1	-954.4	2,722.1	0.00	0.00	
10,700.0	90.00	180.00	7,770.0	-2,822.1	-954.4	2,822.1	0.00	0.00	
10,800.0	90.00	180.00	7,770.0	-2,922.1	-954.4	2,922.1	0.00	0.00	
10,900.0	90.00	180.00	7,770.0	-3,022.1	-954.4	3,022.1	0.00	0.00	
11,000.0	90.00	180.00	7,770.0	-3,122.1	-954.4	3,122.1	0.00	0.00	
11,100.0	90.00	180.00	7,770.0	-3,222.1	-954.4	3,222.1	0.00	0.00	
11,200.0	90.00	180.00	7,770.0	-3,322.1	-954.4	3,322.1	0.00	0.00	
11,300.0	90.00	180.00	7,770.0	-3,422.1	-954.4	3,422.1	0.00	0.00	
11,400.0	90.00	180.00	7,770.0	-3,522.1	-954.4	3,522.1	0.00	0.00	
11,500.0	90.00	180.00	7,770.0	-3,622.1	-954.4	3,622.1	0.00	0.00	
11,600.0	90.00	180.00	7,770.0	-3,722.1	-954.4	3,722.1	0.00	0.00	
11,700.0	90.00	180.00	7,770.0	-3,822.1	-954.4	3,822.1	0.00	0.00	
11,800.0	90.00	180.00	7,770.0	-3,922.1	-954.4	3,922.1	0.00	0.00	
11,900.0	90.00	180.00	7,770.0	-4,022.1	-954.4	4,022.1	0.00	0.00	
12,000.0	90.00	180.00	7,770.0	-4,122.1	-954.4	4,122.1	0.00	0.00	
12,100.0	90.00	180.00	7,770.0	-4,222.1	-954.4	4,222.1	0.00	0.00	
12,200.0	90.00	180.00	7,770.0	-4,322.1	-954.4	4,322.1	0.00	0.00	
12,300.0	90.00	180.00	7,770.0	-4,422.1	-954.4	4,422.1	0.00	0.00	
12,400.0	90.00	180.00	7,770.0	-4,522.1	-954.4	4,522.1	0.00	0.00	
12,500.0	90.00	180.00	7,770.0	-4,622.1	-954.4	4,622.1	0.00	0.00	
12,600.0	90.00	180.00	7,770.0	-4,722.1	-954.4	4,722.1	0.00	0.00	
12,700.0	90.00	180.00	7,770.0	-4,822.1	-954.4	4,822.1	0.00	0.00	
12,800.0	90.00	180.00	7,770.0	-4,922.1	-954.4	4,922.1	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	HZ @ 5035.0ft
Project:	DJ Wattenberg	MD Reference:	HZ @ 5035.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
12,900.0	90.00	180.00	7,770.0	-5,022.1	-954.4	5,022.1	0.00	0.00	
13,000.0	90.00	180.00	7,770.0	-5,122.1	-954.4	5,122.1	0.00	0.00	
13,100.0	90.00	180.00	7,770.0	-5,222.1	-954.4	5,222.1	0.00	0.00	
13,200.0	90.00	180.00	7,770.0	-5,322.1	-954.4	5,322.1	0.00	0.00	
13,300.0	90.00	180.00	7,770.0	-5,422.1	-954.4	5,422.1	0.00	0.00	
13,400.0	90.00	180.00	7,770.0	-5,522.1	-954.4	5,522.1	0.00	0.00	
13,500.0	90.00	180.00	7,770.0	-5,622.1	-954.4	5,622.1	0.00	0.00	
13,600.0	90.00	180.00	7,770.0	-5,722.1	-954.4	5,722.1	0.00	0.00	
13,700.0	90.00	180.00	7,770.0	-5,822.1	-954.4	5,822.1	0.00	0.00	
13,800.0	90.00	180.00	7,770.0	-5,922.1	-954.4	5,922.1	0.00	0.00	
13,900.0	90.00	180.00	7,770.0	-6,022.1	-954.4	6,022.1	0.00	0.00	
14,000.0	90.00	180.00	7,770.0	-6,122.1	-954.4	6,122.1	0.00	0.00	
14,100.0	90.00	180.00	7,770.0	-6,222.1	-954.4	6,222.1	0.00	0.00	
14,200.0	90.00	180.00	7,770.0	-6,322.1	-954.4	6,322.1	0.00	0.00	
14,300.0	90.00	180.00	7,770.0	-6,422.1	-954.4	6,422.1	0.00	0.00	
14,400.0	90.00	180.00	7,770.0	-6,522.1	-954.4	6,522.1	0.00	0.00	
14,500.0	90.00	180.00	7,770.0	-6,622.1	-954.4	6,622.1	0.00	0.00	
14,600.0	90.00	180.00	7,770.0	-6,722.1	-954.4	6,722.1	0.00	0.00	
14,700.0	90.00	180.00	7,770.0	-6,822.1	-954.4	6,822.1	0.00	0.00	
14,800.0	90.00	180.00	7,770.0	-6,922.1	-954.4	6,922.1	0.00	0.00	
14,900.0	90.00	180.00	7,770.0	-7,022.1	-954.4	7,022.1	0.00	0.00	
15,000.0	90.00	180.00	7,770.0	-7,122.1	-954.4	7,122.1	0.00	0.00	
15,100.0	90.00	180.00	7,770.0	-7,222.1	-954.4	7,222.1	0.00	0.00	
15,200.0	90.00	180.00	7,770.0	-7,322.1	-954.4	7,322.1	0.00	0.00	
15,300.0	90.00	180.00	7,770.0	-7,422.1	-954.4	7,422.1	0.00	0.00	
15,400.0	90.00	180.00	7,770.0	-7,522.1	-954.4	7,522.1	0.00	0.00	
15,500.0	90.00	180.00	7,770.0	-7,622.1	-954.4	7,622.1	0.00	0.00	
15,600.0	90.00	180.00	7,770.0	-7,722.1	-954.4	7,722.1	0.00	0.00	
15,700.0	90.00	180.00	7,770.0	-7,822.1	-954.4	7,822.1	0.00	0.00	
15,800.0	90.00	180.00	7,770.0	-7,922.1	-954.4	7,922.1	0.00	0.00	
15,900.0	90.00	180.00	7,770.0	-8,022.1	-954.4	8,022.1	0.00	0.00	
16,000.0	90.00	180.00	7,770.0	-8,122.1	-954.4	8,122.1	0.00	0.00	
16,100.0	90.00	180.00	7,770.0	-8,222.1	-954.4	8,222.1	0.00	0.00	
16,200.0	90.00	180.00	7,770.0	-8,322.1	-954.4	8,322.1	0.00	0.00	
16,300.0	90.00	180.00	7,770.0	-8,422.1	-954.4	8,422.1	0.00	0.00	
16,400.0	90.00	180.00	7,770.0	-8,522.1	-954.4	8,522.1	0.00	0.00	
16,500.0	90.00	180.00	7,770.0	-8,622.1	-954.4	8,622.1	0.00	0.00	
16,600.0	90.00	180.00	7,770.0	-8,722.1	-954.4	8,722.1	0.00	0.00	
16,700.0	90.00	180.00	7,770.0	-8,822.1	-954.4	8,822.1	0.00	0.00	
16,800.0	90.00	180.00	7,770.0	-8,922.1	-954.4	8,922.1	0.00	0.00	
16,900.0	90.00	180.00	7,770.0	-9,022.1	-954.4	9,022.1	0.00	0.00	
17,000.0	90.00	180.00	7,770.0	-9,122.1	-954.4	9,122.1	0.00	0.00	
17,100.0	90.00	180.00	7,770.0	-9,222.1	-954.4	9,222.1	0.00	0.00	
17,200.0	90.00	180.00	7,770.0	-9,322.1	-954.4	9,322.1	0.00	0.00	
17,300.0	90.00	180.00	7,770.0	-9,422.1	-954.4	9,422.1	0.00	0.00	
17,400.0	90.00	180.00	7,770.0	-9,522.1	-954.4	9,522.1	0.00	0.00	
17,500.0	90.00	180.00	7,770.0	-9,622.1	-954.4	9,622.1	0.00	0.00	
17,600.0	90.00	180.00	7,770.0	-9,722.1	-954.4	9,722.1	0.00	0.00	
17,701.3	90.00	180.00	7,770.0	-9,823.4	-954.4	9,823.4	0.00	0.00	TD at 17701.3

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	HZ @ 5035.0ft
Project:	DJ Wattenberg	MD Reference:	HZ @ 5035.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
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									
PBHL 1D-7H	0.00	0.00	7,770.0	-9,823.4	-954.4	1,259,579.96	3,128,197.17	40.045020	-105.042122
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
400.0	400.0	Fox Hills - BASE				
4,840.7	4,799.0	Sussex				
5,144.0	5,099.0	Shannon				
6,959.2	6,895.0	Teepee Buttes (*if present)				
7,426.3	7,349.0	Sharon Springs				
7,491.8	7,407.0	Niobrara				
7,628.3	7,518.0	B Chalk				
7,663.4	7,544.0	B Marl				
7,788.7	7,627.0	C Chalk				
7,834.2	7,653.0	C Marl				
7,895.1	7,684.0	D Chalk				
8,045.9	7,741.0	Fort Hayes				
8,137.1	7,761.0	Codell				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	Comment	
350.0	350.0	0.0	0.0	KOP @ 350' MD	
1,185.5	1,182.5	22.6	-56.4	EOB; 8.35°	
7,087.6	7,022.0	341.7	-852.5	Start 8° Build/Turn	
8,251.3	7,770.0	-373.4	-954.4	LP @ 7770' TVD; 90°	
17,701.3	7,770.0	-9,823.4	-954.4	TD at 17701.3	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)

Morgan Hills 1D-7H-A168

HZ

Plan #2

Anticollision Report

03 September, 2014

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,550.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date 9/3/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	17,701.3	Plan #2 (HZ)	Geolink MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S29-T1N-R68W (Pratt/Waste Connections)						
WILLIAM PELTIER 11-20 (EXISTING) - ENCANA WELL						Out of range
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)						
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN O						Out of range
ERIE CHAMPLIN B UNIT 1 - ENCANA WELL - NO SUR	14,058.6	7,805.0	401.0	276.4	3.217	CC, ES
ERIE CHAMPLIN B UNIT 1 - ENCANA WELL - NO SUR	14,100.0	7,805.0	403.1	277.8	3.216	SF
ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO SUR	17,085.7	7,800.0	367.3	189.9	2.070	CC, ES
ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO SUR	17,100.0	7,800.0	367.6	189.9	2.069	SF
Morgan Hills 1A-7H-A168 - HZ - Plan #2	166.3	167.3	29.9	29.4	55.771	CC
Morgan Hills 1A-7H-A168 - HZ - Plan #2	200.0	201.0	29.9	29.3	45.756	ES
Morgan Hills 1A-7H-A168 - HZ - Plan #2	17,701.3	17,589.7	787.9	455.0	2.367	SF
Morgan Hills 1B-7H-A168 - HZ - Plan #2	232.0	233.0	19.9	19.1	25.938	CC
Morgan Hills 1B-7H-A168 - HZ - Plan #2	300.0	300.8	20.1	19.1	20.027	ES
Morgan Hills 1B-7H-A168 - HZ - Plan #2	17,701.3	17,775.9	500.1	151.0	1.432	Level 3, SF
Morgan Hills 1C-7H-A168 - HZ - Plan #2	300.0	300.0	9.8	8.8	9.777	CC, ES
Morgan Hills 1C-7H-A168 - HZ - Plan #2	17,701.3	17,490.0	346.6	91.1	1.357	Level 3, SF
Morgan Hills 1E-7H-A168 - HZ - Plan #2	350.0	350.0	10.1	8.9	8.565	CC, ES
Morgan Hills 1E-7H-A168 - HZ - Plan #2	17,701.3	17,436.5	346.6	91.5	1.359	Level 3, SF
Morgan Hills 1F-7H-A168 - HZ - Plan #2	350.0	350.0	20.1	19.0	17.129	CC, ES
Morgan Hills 1F-7H-A168 - HZ - Plan #2	17,701.3	17,655.5	500.0	150.8	1.432	Level 3, SF
Morgan Hills 1G-7H-A168 - HZ - Plan #2	350.0	350.0	30.2	29.0	25.694	CC, ES
Morgan Hills 1G-7H-A168 - HZ - Plan #2	17,701.3	17,406.3	787.6	454.5	2.365	SF
Morgan Hills 1H-7H-A168 - HZ - Plan #2	350.0	350.0	40.0	38.8	34.020	CC, ES
Morgan Hills 1H-7H-A168 - HZ - Plan #2	17,701.3	17,639.2	1,000.1	650.9	2.864	SF
Morgan Hills 1I-7H-A168 - HZ - Plan #2	350.0	350.0	50.1	48.9	42.585	CC, ES
Morgan Hills 1I-7H-A168 - HZ - Plan #2	17,701.3	17,403.8	1,272.9	929.9	3.711	SF
Sosa 21-18 - DD (MWD) - DD						Out of range
Sosa 21-18 - DD (MWD) - Plan #2						Out of range
Sosa 22-18 - DD - DD						Out of range
Sosa 22-18 - DD - Plan #2						Out of range
THOMAS 33-7 (EXISTING) - ENCANA WELL - SURVEY	10,887.8	8,025.8	678.4	597.0	8.333	CC
THOMAS 33-7 (EXISTING) - ENCANA WELL - SURVEY	10,900.0	8,025.8	678.5	596.9	8.314	ES
THOMAS 33-7 (EXISTING) - ENCANA WELL - SURVEY	11,000.0	8,025.6	687.6	604.3	8.253	SF
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SU	1,530.8	1,521.2	247.4	241.4	41.109	CC
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SU	1,600.0	1,589.6	247.6	241.3	39.048	ES
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SU	8,200.0	7,765.2	770.8	741.7	26.496	SF
WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA - NO S	9,513.1	7,775.0	640.7	593.8	13.657	CC, ES
WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA - NO S	9,700.0	7,775.0	667.4	617.4	13.367	SF
WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - NO SU	8,994.4	7,791.0	263.3	224.4	6.769	CC
WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - NO SU	9,000.0	7,791.0	263.4	224.4	6.756	ES, SF
Woolley-Becky 2H-7H-E168 - Hz - Plan #2	9,329.0	8,064.2	1,060.0	1,014.3	23.163	CC, ES
Woolley-Becky 2H-7H-E168 - Hz - Plan #2	9,700.0	7,900.0	1,094.2	1,044.7	22.113	SF
Woolley-Sosa 2E-7H-E168 - HZ - Plan #2						Out of range
Woolley-Sosa 2F-7H-E168 - HZ - Plan #1						Out of range
Woolley-Sosa 2G-7H-E168 - HZ - Plan #1						Out of range

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - ERIE CHAMPLIN B UNIT 1 - ENCANA WELL - NO												Offset Site Error:	0.0 ft
Survey Program: 8393-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor	
12,600.0	7,770.0	7,805.0	7,805.0	87.3	13.6	-90.00	-6,180.7	-553.4	1,512.7	1,413.4	99.30	15.234	
12,700.0	7,770.0	7,805.0	7,805.0	89.0	13.6	-90.00	-6,180.7	-553.4	1,416.5	1,315.5	101.03	14.021	
12,800.0	7,770.0	7,805.0	7,805.0	90.7	13.6	-90.00	-6,180.7	-553.4	1,320.9	1,218.2	102.77	12.854	
12,900.0	7,770.0	7,805.0	7,805.0	92.4	13.6	-90.00	-6,180.7	-553.4	1,226.0	1,121.5	104.50	11.732	
13,000.0	7,770.0	7,805.0	7,805.0	94.1	13.6	-90.00	-6,180.7	-553.4	1,132.0	1,025.8	106.23	10.656	
13,100.0	7,770.0	7,805.0	7,805.0	95.8	13.6	-90.00	-6,180.7	-553.4	1,039.1	931.1	107.97	9.624	
13,200.0	7,770.0	7,805.0	7,805.0	97.5	13.6	-90.00	-6,180.7	-553.4	947.6	837.9	109.71	8.638	
13,300.0	7,770.0	7,805.0	7,805.0	99.2	13.6	-90.00	-6,180.7	-553.4	858.1	746.6	111.44	7.700	
13,400.0	7,770.0	7,805.0	7,805.0	101.0	13.6	-90.00	-6,180.7	-553.4	771.1	657.9	113.18	6.813	
13,500.0	7,770.0	7,805.0	7,805.0	102.7	13.6	-90.00	-6,180.7	-553.4	687.6	572.7	114.92	5.984	
13,600.0	7,770.0	7,805.0	7,805.0	104.4	13.6	-90.00	-6,180.7	-553.4	609.2	492.5	116.66	5.222	
13,700.0	7,770.0	7,805.0	7,805.0	106.1	13.6	-90.00	-6,180.7	-553.4	537.9	419.6	118.39	4.544	
13,800.0	7,770.0	7,805.0	7,805.0	107.8	13.6	-90.00	-6,180.7	-553.4	477.1	357.0	120.13	3.972	
13,900.0	7,770.0	7,805.0	7,805.0	109.5	13.6	-90.00	-6,180.7	-553.4	431.2	309.3	121.87	3.538	
14,000.0	7,770.0	7,805.0	7,805.0	111.3	13.6	-90.00	-6,180.7	-553.4	405.3	281.6	123.61	3.278	
14,058.6	7,770.0	7,805.0	7,805.0	112.3	13.6	-90.00	-6,180.7	-553.4	401.0	276.4	124.63	3.217 CC, ES	
14,100.0	7,770.0	7,805.0	7,805.0	113.0	13.6	-90.00	-6,180.7	-553.4	403.1	277.8	125.36	3.216 SF	
14,200.0	7,770.0	7,805.0	7,805.0	114.7	13.6	-90.00	-6,180.7	-553.4	425.2	298.1	127.10	3.345	
14,300.0	7,770.0	7,805.0	7,805.0	116.4	13.6	-90.00	-6,180.7	-553.4	468.1	339.2	128.84	3.633	
14,400.0	7,770.0	7,805.0	7,805.0	118.2	13.6	-90.00	-6,180.7	-553.4	526.6	396.1	130.58	4.033	
14,500.0	7,770.0	7,805.0	7,805.0	119.9	13.6	-90.00	-6,180.7	-553.4	596.4	464.0	132.32	4.507	
14,600.0	7,770.0	7,805.0	7,805.0	121.6	13.6	-90.00	-6,180.7	-553.4	673.7	539.7	134.07	5.025	
14,700.0	7,770.0	7,805.0	7,805.0	123.3	13.6	-90.00	-6,180.7	-553.4	756.4	620.6	135.81	5.570	
14,800.0	7,770.0	7,805.0	7,805.0	125.1	13.6	-90.00	-6,180.7	-553.4	842.9	705.4	137.55	6.128	
14,900.0	7,770.0	7,805.0	7,805.0	126.8	13.6	-90.00	-6,180.7	-553.4	932.1	792.8	139.30	6.691	
15,000.0	7,770.0	7,805.0	7,805.0	128.5	13.6	-90.00	-6,180.7	-553.4	1,023.3	882.2	141.04	7.255	
15,100.0	7,770.0	7,805.0	7,805.0	130.2	13.6	-90.00	-6,180.7	-553.4	1,115.9	973.2	142.78	7.816	
15,200.0	7,770.0	7,805.0	7,805.0	132.0	13.6	-90.00	-6,180.7	-553.4	1,209.8	1,065.3	144.53	8.371	
15,300.0	7,770.0	7,805.0	7,805.0	133.7	13.6	-90.00	-6,180.7	-553.4	1,304.6	1,158.3	146.27	8.919	
15,400.0	7,770.0	7,805.0	7,805.0	135.4	13.6	-90.00	-6,180.7	-553.4	1,400.1	1,252.0	148.02	9.459	
15,500.0	7,770.0	7,805.0	7,805.0	137.2	13.6	-90.00	-6,180.7	-553.4	1,496.1	1,346.4	149.76	9.990	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO											Offset Site Error:		0.0 ft	
Survey Program: 8413-Geolink MWD											Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
15,600.0	7,770.0	7,800.0	7,800.0	138.9	13.6	-90.00	-9,207.8	-587.1	1,530.5	1,379.0	151.50	10.102		
15,700.0	7,770.0	7,800.0	7,800.0	140.6	13.6	-90.00	-9,207.8	-587.1	1,433.6	1,280.3	153.25	9.355		
15,800.0	7,770.0	7,800.0	7,800.0	142.4	13.6	-90.00	-9,207.8	-587.1	1,337.2	1,182.2	154.99	8.627		
15,900.0	7,770.0	7,800.0	7,800.0	144.1	13.6	-90.00	-9,207.8	-587.1	1,241.3	1,084.6	156.74	7.920		
16,000.0	7,770.0	7,800.0	7,800.0	145.8	13.6	-90.00	-9,207.8	-587.1	1,146.2	987.7	158.48	7.232		
16,100.0	7,770.0	7,800.0	7,800.0	147.6	13.6	-90.00	-9,207.8	-587.1	1,051.9	891.7	160.23	6.565		
16,200.0	7,770.0	7,800.0	7,800.0	149.3	13.6	-90.00	-9,207.8	-587.1	958.9	796.9	161.98	5.920		
16,300.0	7,770.0	7,800.0	7,800.0	151.0	13.6	-90.00	-9,207.8	-587.1	867.4	703.6	163.72	5.298		
16,400.0	7,770.0	7,800.0	7,800.0	152.8	13.6	-90.00	-9,207.8	-587.1	777.9	612.4	165.47	4.701		
16,500.0	7,770.0	7,800.0	7,800.0	154.5	13.6	-90.00	-9,207.8	-587.1	691.4	524.2	167.22	4.135		
16,600.0	7,770.0	7,800.0	7,800.0	156.3	13.6	-90.00	-9,207.8	-587.1	609.0	440.0	168.96	3.604		
16,700.0	7,770.0	7,800.0	7,800.0	158.0	13.6	-90.00	-9,207.8	-587.1	532.7	361.9	170.71	3.120		
16,800.0	7,770.0	7,800.0	7,800.0	159.7	13.6	-90.00	-9,207.8	-587.1	465.4	292.9	172.46	2.698		
16,900.0	7,770.0	7,800.0	7,800.0	161.5	13.6	-90.00	-9,207.8	-587.1	411.6	237.4	174.21	2.363		
17,000.0	7,770.0	7,800.0	7,800.0	163.2	13.6	-90.00	-9,207.8	-587.1	377.2	201.3	175.95	2.144		
17,085.7	7,770.0	7,800.0	7,800.0	164.7	13.6	-90.00	-9,207.8	-587.1	367.3	189.9	177.45	2.070 CC, ES		
17,100.0	7,770.0	7,800.0	7,800.0	164.9	13.6	-90.00	-9,207.8	-587.1	367.6	189.9	177.70	2.069 SF		
17,200.0	7,770.0	7,800.0	7,800.0	166.7	13.6	-90.00	-9,207.8	-587.1	384.7	205.2	179.45	2.144		
17,300.0	7,770.0	7,800.0	7,800.0	168.4	13.6	-90.00	-9,207.8	-587.1	425.3	244.1	181.20	2.347		
17,400.0	7,770.0	7,800.0	7,800.0	170.2	13.6	-90.00	-9,207.8	-587.1	483.4	300.5	182.95	2.642		
17,500.0	7,770.0	7,800.0	7,800.0	171.9	13.6	-90.00	-9,207.8	-587.1	553.7	369.0	184.70	2.998		
17,600.0	7,770.0	7,800.0	7,800.0	173.6	13.6	-90.00	-9,207.8	-587.1	632.0	445.5	186.44	3.390		
17,701.3	7,770.0	7,800.0	7,800.0	175.4	13.6	-90.00	-9,207.8	-587.1	716.9	528.7	188.22	3.809		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance								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	1.0	1.0	0.0	0.0	-89.30	0.4	-29.9	29.9					
100.0	100.0	101.0	101.0	0.2	0.2	-89.30	0.4	-29.9	29.9	29.6	0.31	98.048		
166.3	166.3	167.3	167.3	0.3	0.3	-89.30	0.4	-29.9	29.9	29.4	0.54	55.771 CC		
200.0	200.0	201.0	201.0	0.3	0.3	-89.30	0.4	-29.9	29.9	29.3	0.65	45.756 ES		
300.0	300.0	300.5	300.5	0.5	0.5	-88.96	0.6	-30.8	30.8	29.8	1.00	30.711		
350.0	350.0	350.2	350.2	0.6	0.6	-88.55	0.8	-31.9	31.9	30.7	1.18	27.038		
400.0	400.0	400.0	400.0	0.7	0.7	-20.00	1.1	-33.3	33.2	31.8	1.35	24.556		
500.0	500.0	499.3	499.1	0.9	0.9	-19.61	2.1	-37.6	35.8	34.1	1.70	21.073		
600.0	599.9	598.6	598.3	1.0	1.1	-19.66	3.5	-43.5	38.5	36.5	2.05	18.797		
700.0	699.8	697.9	697.3	1.2	1.3	-20.07	5.2	-51.0	41.3	38.9	2.40	17.197		
800.0	799.5	797.1	796.0	1.4	1.5	-20.77	7.3	-60.2	44.1	41.3	2.75	16.013		
900.0	899.2	896.3	894.6	1.6	1.8	-21.69	9.8	-71.1	47.0	43.9	3.11	15.098		
1,000.0	998.6	995.5	992.9	1.9	2.0	-22.81	12.7	-83.7	50.0	46.5	3.48	14.365		
1,100.0	1,097.9	1,094.5	1,090.9	2.1	2.3	-24.07	15.9	-97.9	53.0	49.2	3.85	13.756		
1,185.5	1,182.5	1,179.2	1,174.4	2.4	2.6	-25.24	19.0	-111.3	55.7	51.5	4.19	13.304		
1,200.0	1,196.9	1,193.6	1,188.6	2.4	2.6	-25.44	19.6	-113.7	56.2	52.0	4.25	13.236		
1,300.0	1,295.8	1,292.5	1,285.9	2.7	3.0	-26.45	23.6	-131.2	60.5	55.8	4.65	13.009		
1,400.0	1,394.8	1,391.3	1,382.7	3.0	3.4	-26.85	28.0	-150.2	66.4	61.4	5.06	13.141		
1,500.0	1,493.7	1,489.9	1,479.0	3.3	3.8	-26.77	32.7	-170.9	74.0	68.6	5.46	13.560		
1,600.0	1,592.6	1,588.1	1,574.6	3.6	4.2	-26.35	37.8	-193.0	83.2	77.4	5.86	14.214		
1,700.0	1,691.6	1,686.5	1,669.9	3.9	4.6	-25.71	43.2	-216.8	94.0	87.8	6.24	15.054		
1,800.0	1,790.5	1,785.9	1,766.1	4.2	5.1	-25.13	48.8	-241.2	105.2	98.6	6.63	15.864		
1,900.0	1,889.5	1,885.2	1,862.2	4.5	5.6	-24.66	54.4	-265.6	116.5	109.5	7.02	16.584		
2,000.0	1,988.4	1,984.6	1,958.4	4.8	6.0	-24.28	60.0	-290.0	127.7	120.3	7.41	17.229		
2,100.0	2,087.3	2,084.0	2,054.5	5.1	6.5	-23.95	65.6	-314.4	139.0	131.2	7.80	17.809		
2,200.0	2,186.3	2,183.3	2,150.7	5.4	7.0	-23.68	71.2	-338.8	150.2	142.0	8.19	18.335		
2,300.0	2,285.2	2,282.7	2,246.8	5.7	7.5	-23.44	76.8	-363.2	161.5	152.9	8.58	18.812		
2,400.0	2,384.2	2,382.1	2,343.0	6.0	7.9	-23.24	82.4	-387.7	172.7	163.8	8.97	19.248		
2,500.0	2,483.1	2,481.4	2,439.1	6.3	8.4	-23.06	88.0	-412.1	184.0	174.6	9.36	19.648		
2,600.0	2,582.0	2,580.8	2,535.3	6.6	8.9	-22.90	93.6	-436.5	195.3	185.5	9.76	20.016		
2,700.0	2,681.0	2,680.1	2,631.5	6.9	9.4	-22.75	99.2	-460.9	206.5	196.4	10.15	20.355		
2,800.0	2,779.9	2,779.5	2,727.6	7.2	9.8	-22.63	104.8	-485.3	217.8	207.3	10.54	20.669		
2,900.0	2,878.8	2,878.9	2,823.8	7.5	10.3	-22.51	110.4	-509.7	229.1	218.1	10.93	20.960		
3,000.0	2,977.8	2,978.2	2,919.9	7.8	10.8	-22.41	116.0	-534.1	240.3	229.0	11.32	21.232		
3,100.0	3,076.7	3,077.6	3,016.1	8.1	11.3	-22.31	121.6	-558.5	251.6	239.9	11.71	21.485		
3,200.0	3,175.7	3,177.0	3,112.2	8.4	11.7	-22.22	127.3	-582.9	262.9	250.8	12.10	21.722		
3,300.0	3,274.6	3,276.3	3,208.4	8.7	12.2	-22.14	132.9	-607.3	274.1	261.6	12.49	21.944		
3,400.0	3,373.5	3,375.7	3,304.5	9.1	12.7	-22.07	138.5	-631.8	285.4	272.5	12.88	22.152		
3,500.0	3,472.5	3,475.0	3,400.7	9.4	13.2	-22.00	144.1	-656.2	296.7	283.4	13.27	22.348		
3,600.0	3,571.4	3,574.4	3,496.8	9.7	13.7	-21.94	149.7	-680.6	307.9	294.3	13.67	22.533		
3,700.0	3,670.4	3,673.8	3,593.0	10.0	14.1	-21.88	155.3	-705.0	319.2	305.1	14.06	22.708		
3,800.0	3,769.3	3,773.1	3,689.2	10.3	14.6	-21.83	160.9	-729.4	330.5	316.0	14.45	22.873		
3,900.0	3,868.2	3,872.5	3,785.3	10.6	15.1	-21.78	166.5	-753.8	341.7	326.9	14.84	23.029		
4,000.0	3,967.2	3,971.9	3,881.5	10.9	15.6	-21.73	172.1	-778.2	353.0	337.8	15.23	23.177		
4,100.0	4,066.1	4,071.2	3,977.6	11.2	16.1	-21.68	177.7	-802.6	364.3	348.7	15.62	23.318		
4,200.0	4,165.1	4,170.6	4,073.8	11.5	16.5	-21.64	183.3	-827.0	375.6	359.5	16.01	23.452		
4,300.0	4,264.0	4,269.9	4,169.9	11.8	17.0	-21.60	188.9	-851.4	386.8	370.4	16.40	23.580		
4,400.0	4,362.9	4,369.3	4,266.1	12.1	17.5	-21.57	194.5	-875.9	398.1	381.3	16.80	23.701		
4,500.0	4,461.9	4,468.7	4,362.2	12.4	18.0	-21.53	200.1	-900.3	409.4	392.2	17.19	23.817		
4,600.0	4,560.8	4,568.0	4,458.4	12.8	18.5	-21.50	205.7	-924.7	420.6	403.1	17.58	23.928		
4,700.0	4,659.7	4,667.4	4,554.5	13.1	18.9	-21.47	211.3	-949.1	431.9	413.9	17.97	24.034		
4,800.0	4,758.7	4,766.8	4,650.7	13.4	19.4	-21.44	216.9	-973.5	443.2	424.8	18.36	24.136		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
4,900.0	4,857.6	4,866.1	4,746.9	13.7	19.9	-21.41	222.5	-997.9	454.5	435.7	18.75	24.233		
5,000.0	4,956.6	4,965.5	4,843.0	14.0	20.4	-21.38	228.1	-1,022.3	465.7	446.6	19.15	24.326		
5,100.0	5,055.5	5,064.8	4,939.2	14.3	20.9	-21.35	233.7	-1,046.7	477.0	457.5	19.54	24.416		
5,200.0	5,154.4	5,164.2	5,035.3	14.6	21.3	-21.33	239.3	-1,071.1	488.3	468.3	19.93	24.501		
5,300.0	5,253.4	5,263.6	5,131.5	14.9	21.8	-21.31	244.9	-1,095.5	499.5	479.2	20.32	24.584		
5,400.0	5,352.3	5,362.9	5,227.6	15.2	22.3	-21.28	250.5	-1,120.0	510.8	490.1	20.71	24.664		
5,500.0	5,451.3	5,462.3	5,323.8	15.5	22.8	-21.26	256.1	-1,144.4	522.1	501.0	21.10	24.740		
5,600.0	5,550.2	5,561.7	5,419.9	15.8	23.3	-21.24	261.7	-1,168.8	533.4	511.9	21.49	24.814		
5,700.0	5,649.1	5,661.0	5,516.1	16.1	23.8	-21.22	267.3	-1,193.2	544.6	522.7	21.89	24.885		
5,800.0	5,748.1	5,760.4	5,612.2	16.5	24.2	-21.20	272.9	-1,217.6	555.9	533.6	22.28	24.954		
5,900.0	5,847.0	5,859.7	5,708.4	16.8	24.7	-21.18	278.5	-1,242.0	567.2	544.5	22.67	25.020		
6,000.0	5,945.9	5,959.1	5,804.6	17.1	25.2	-21.17	284.1	-1,266.4	578.4	555.4	23.06	25.084		
6,100.0	6,044.9	6,058.5	5,900.7	17.4	25.7	-21.15	289.7	-1,290.8	589.7	566.3	23.45	25.146		
6,200.0	6,143.8	6,157.8	5,996.9	17.7	26.2	-21.13	295.3	-1,315.2	601.0	577.1	23.84	25.206		
6,300.0	6,242.8	6,257.2	6,093.0	18.0	26.6	-21.12	300.9	-1,339.6	612.3	588.0	24.24	25.264		
6,400.0	6,341.7	6,356.6	6,189.2	18.3	27.1	-21.10	306.5	-1,364.1	623.5	598.9	24.63	25.320		
6,500.0	6,440.6	6,455.9	6,285.3	18.6	27.6	-21.09	312.1	-1,388.5	634.8	609.8	25.02	25.374		
6,600.0	6,539.6	6,555.3	6,381.5	18.9	28.1	-21.07	317.7	-1,412.9	646.1	620.7	25.41	25.426		
6,700.0	6,638.5	6,654.6	6,477.6	19.2	28.6	-21.06	323.3	-1,437.3	657.4	631.6	25.80	25.477		
6,800.0	6,737.5	6,754.0	6,573.8	19.6	29.1	-21.05	328.9	-1,461.7	668.6	642.4	26.19	25.527		
6,900.0	6,836.4	6,853.4	6,669.9	19.9	29.5	-21.04	334.5	-1,486.1	679.9	653.3	26.58	25.575		
7,000.0	6,935.3	6,952.7	6,766.1	20.2	30.0	-21.02	340.1	-1,510.5	691.2	664.2	26.98	25.622		
7,087.6	7,022.0	7,039.9	6,850.5	20.4	30.4	-21.19	342.8	-1,531.9	701.0	673.7	27.35	25.637		
7,100.0	7,034.3	7,052.2	6,862.4	20.5	30.5	-14.84	342.5	-1,535.0	702.4	675.0	27.44	25.596		
7,150.0	7,083.8	7,101.6	6,910.2	20.6	30.7	13.12	338.9	-1,547.1	708.1	680.3	27.79	25.478		
7,200.0	7,133.2	7,150.8	6,957.4	20.7	30.9	35.74	331.9	-1,559.1	713.8	685.7	28.09	25.412		
7,250.0	7,182.3	7,200.0	7,004.0	20.8	31.1	49.60	321.7	-1,570.9	719.4	691.1	28.32	25.401		
7,300.0	7,230.8	7,248.5	7,049.2	20.9	31.2	57.73	308.3	-1,582.4	725.0	696.5	28.49	25.447		
7,350.0	7,278.4	7,297.0	7,093.4	21.0	31.4	62.70	291.9	-1,593.6	730.5	701.9	28.59	25.550		
7,400.0	7,325.0	7,345.3	7,136.3	21.0	31.5	65.87	272.4	-1,604.5	735.9	707.2	28.62	25.708		
7,450.0	7,370.3	7,393.5	7,177.6	21.1	31.7	67.98	250.2	-1,615.0	741.1	712.5	28.59	25.919		
7,500.0	7,414.0	7,441.4	7,217.3	21.1	31.8	69.40	225.2	-1,625.1	746.2	717.7	28.50	26.178		
7,550.0	7,456.1	7,489.3	7,255.2	21.2	31.9	70.38	197.6	-1,634.7	751.1	722.7	28.37	26.477		
7,600.0	7,496.2	7,536.9	7,291.0	21.2	32.1	71.05	167.5	-1,643.8	755.8	727.6	28.19	26.807		
7,650.0	7,534.2	7,584.5	7,324.8	21.2	32.2	71.51	135.2	-1,652.3	760.2	732.2	28.00	27.152		
7,700.0	7,569.9	7,631.9	7,356.3	21.3	32.3	71.82	100.7	-1,660.3	764.4	736.6	27.80	27.496		
7,750.0	7,603.1	7,679.2	7,385.5	21.4	32.4	72.02	64.2	-1,667.8	768.2	740.6	27.62	27.818		
7,800.0	7,633.7	7,726.4	7,412.2	21.4	32.6	72.15	25.9	-1,674.5	771.8	744.4	27.46	28.108		
7,850.0	7,661.5	7,773.6	7,436.4	21.5	32.7	72.21	-14.1	-1,680.7	775.1	747.6	27.43	28.256		
7,900.0	7,686.3	7,820.6	7,458.0	21.6	32.8	72.25	-55.5	-1,686.2	778.0	750.5	27.44	28.350		
7,950.0	7,708.1	7,867.6	7,476.8	21.8	33.0	72.26	-98.3	-1,690.9	780.5	753.0	27.57	28.308		
8,000.0	7,726.8	7,914.5	7,492.9	22.0	33.1	72.25	-142.2	-1,695.0	782.7	754.9	27.84	28.119		
8,050.0	7,742.1	7,961.4	7,506.1	22.2	33.3	72.23	-187.0	-1,698.4	784.5	756.3	28.25	27.776		
8,100.0	7,754.2	8,008.3	7,516.5	22.4	33.4	72.22	-232.6	-1,701.0	785.9	757.1	28.81	27.283		
8,150.0	7,762.9	8,055.1	7,523.9	22.6	33.6	72.20	-278.8	-1,702.9	787.0	757.4	29.52	26.657		
8,200.0	7,768.2	8,101.9	7,528.5	22.9	33.8	72.19	-325.4	-1,704.0	787.6	757.2	30.38	25.921		
8,251.3	7,770.0	8,150.0	7,530.0	23.2	34.0	72.19	-373.4	-1,704.4	787.8	756.4	31.41	25.080		
8,300.0	7,770.0	8,198.6	7,530.0	23.5	34.2	72.19	-422.1	-1,704.4	787.8	755.5	32.28	24.407		
8,400.0	7,770.0	8,298.6	7,530.0	24.2	34.7	72.19	-522.1	-1,704.4	787.8	753.6	34.23	23.014		
8,500.0	7,770.0	8,398.6	7,530.0	25.1	35.2	72.19	-622.1	-1,704.4	787.8	751.4	36.39	21.651		
8,600.0	7,770.0	8,498.6	7,530.0	26.0	35.9	72.19	-722.1	-1,704.4	787.8	749.1	38.71	20.351		
8,700.0	7,770.0	8,598.6	7,530.0	27.0	36.6	72.19	-822.1	-1,704.4	787.8	746.6	41.18	19.133		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
8,800.0	7,770.0	8,698.6	7,530.0	28.1	37.4	72.19	-922.1	-1,704.4	787.8	744.0	43.76	18.004		
8,900.0	7,770.0	8,798.6	7,530.0	29.2	38.2	72.19	-1,022.1	-1,704.4	787.8	741.4	46.44	16.965		
9,000.0	7,770.0	8,898.6	7,530.0	30.5	39.2	72.19	-1,122.1	-1,704.4	787.8	738.6	49.19	16.014		
9,100.0	7,770.0	8,998.6	7,530.0	31.7	40.1	72.19	-1,222.1	-1,704.4	787.8	735.8	52.02	15.143		
9,200.0	7,770.0	9,098.6	7,530.0	33.0	41.1	72.19	-1,322.1	-1,704.4	787.8	732.9	54.91	14.347		
9,300.0	7,770.0	9,198.6	7,530.0	34.4	42.2	72.19	-1,422.1	-1,704.4	787.8	730.0	57.84	13.619		
9,400.0	7,770.0	9,298.6	7,530.0	35.7	43.3	72.19	-1,522.1	-1,704.4	787.8	727.0	60.82	12.953		
9,500.0	7,770.0	9,398.6	7,530.0	37.1	44.5	72.19	-1,622.1	-1,704.4	787.8	724.0	63.83	12.341		
9,600.0	7,770.0	9,498.6	7,530.0	38.6	45.7	72.19	-1,722.1	-1,704.4	787.8	720.9	66.88	11.780		
9,700.0	7,770.0	9,598.6	7,530.0	40.0	46.9	72.19	-1,822.1	-1,704.4	787.8	717.8	69.95	11.262		
9,800.0	7,770.0	9,698.6	7,530.0	41.5	48.2	72.19	-1,922.1	-1,704.4	787.8	714.8	73.05	10.785		
9,900.0	7,770.0	9,798.6	7,530.0	43.0	49.5	72.19	-2,022.1	-1,704.4	787.8	711.6	76.16	10.344		
10,000.0	7,770.0	9,898.6	7,530.0	44.6	50.8	72.19	-2,122.1	-1,704.4	787.8	708.5	79.30	9.935		
10,100.0	7,770.0	9,998.6	7,530.0	46.1	52.1	72.19	-2,222.1	-1,704.4	787.8	705.3	82.45	9.555		
10,200.0	7,770.0	10,098.6	7,530.0	47.7	53.5	72.19	-2,322.1	-1,704.4	787.8	702.2	85.61	9.202		
10,300.0	7,770.0	10,198.6	7,530.0	49.2	54.9	72.19	-2,422.1	-1,704.4	787.8	699.0	88.79	8.873		
10,400.0	7,770.0	10,298.6	7,530.0	50.8	56.3	72.19	-2,522.1	-1,704.4	787.8	695.8	91.98	8.565		
10,500.0	7,770.0	10,398.6	7,530.0	52.4	57.8	72.19	-2,622.1	-1,704.4	787.8	692.6	95.18	8.277		
10,600.0	7,770.0	10,498.6	7,530.0	54.0	59.2	72.19	-2,722.1	-1,704.4	787.8	689.4	98.39	8.007		
10,700.0	7,770.0	10,598.6	7,530.0	55.6	60.7	72.19	-2,822.1	-1,704.4	787.8	686.2	101.61	7.753		
10,800.0	7,770.0	10,698.6	7,530.0	57.2	62.2	72.19	-2,922.1	-1,704.4	787.8	683.0	104.84	7.515		
10,900.0	7,770.0	10,798.6	7,530.0	58.9	63.7	72.19	-3,022.1	-1,704.4	787.8	679.7	108.07	7.290		
11,000.0	7,770.0	10,898.6	7,530.0	60.5	65.2	72.19	-3,122.1	-1,704.4	787.8	676.5	111.31	7.078		
11,100.0	7,770.0	10,998.6	7,530.0	62.2	66.7	72.19	-3,222.1	-1,704.4	787.8	673.2	114.55	6.877		
11,200.0	7,770.0	11,098.6	7,530.0	63.8	68.2	72.19	-3,322.1	-1,704.4	787.8	670.0	117.80	6.687		
11,300.0	7,770.0	11,198.6	7,530.0	65.5	69.8	72.19	-3,422.1	-1,704.4	787.8	666.7	121.06	6.507		
11,400.0	7,770.0	11,298.6	7,530.0	67.1	71.3	72.19	-3,522.1	-1,704.4	787.8	663.5	124.32	6.337		
11,500.0	7,770.0	11,398.6	7,530.0	68.8	72.9	72.19	-3,622.1	-1,704.4	787.8	660.2	127.58	6.175		
11,600.0	7,770.0	11,498.6	7,530.0	70.4	74.5	72.19	-3,722.1	-1,704.4	787.8	656.9	130.85	6.020		
11,700.0	7,770.0	11,598.6	7,530.0	72.1	76.0	72.19	-3,822.1	-1,704.4	787.8	653.7	134.13	5.874		
11,800.0	7,770.0	11,698.6	7,530.0	73.8	77.6	72.19	-3,922.1	-1,704.4	787.8	650.4	137.40	5.734		
11,900.0	7,770.0	11,798.6	7,530.0	75.5	79.2	72.19	-4,022.1	-1,704.4	787.8	647.1	140.68	5.600		
12,000.0	7,770.0	11,898.6	7,530.0	77.1	80.8	72.19	-4,122.1	-1,704.4	787.8	643.8	143.96	5.472		
12,100.0	7,770.0	11,998.6	7,530.0	78.8	82.4	72.19	-4,222.1	-1,704.4	787.8	640.6	147.25	5.350		
12,200.0	7,770.0	12,098.6	7,530.0	80.5	84.1	72.19	-4,322.1	-1,704.4	787.8	637.3	150.53	5.233		
12,300.0	7,770.0	12,198.6	7,530.0	82.2	85.7	72.19	-4,422.1	-1,704.4	787.8	634.0	153.82	5.122		
12,400.0	7,770.0	12,298.6	7,530.0	83.9	87.3	72.19	-4,522.1	-1,704.4	787.8	630.7	157.11	5.014		
12,500.0	7,770.0	12,398.6	7,530.0	85.6	88.9	72.19	-4,622.1	-1,704.4	787.8	627.4	160.41	4.911		
12,600.0	7,770.0	12,498.6	7,530.0	87.3	90.6	72.19	-4,722.1	-1,704.4	787.8	624.1	163.70	4.812		
12,700.0	7,770.0	12,598.6	7,530.0	89.0	92.2	72.19	-4,822.1	-1,704.4	787.8	620.8	167.00	4.717		
12,800.0	7,770.0	12,698.6	7,530.0	90.7	93.8	72.19	-4,922.1	-1,704.4	787.8	617.5	170.30	4.626		
12,900.0	7,770.0	12,798.6	7,530.0	92.4	95.5	72.19	-5,022.1	-1,704.4	787.8	614.2	173.60	4.538		
13,000.0	7,770.0	12,898.6	7,530.0	94.1	97.1	72.19	-5,122.1	-1,704.4	787.8	610.9	176.90	4.453		
13,100.0	7,770.0	12,998.6	7,530.0	95.8	98.8	72.19	-5,222.1	-1,704.4	787.8	607.6	180.20	4.372		
13,200.0	7,770.0	13,098.6	7,530.0	97.5	100.5	72.19	-5,322.1	-1,704.4	787.8	604.3	183.51	4.293		
13,300.0	7,770.0	13,198.6	7,530.0	99.2	102.1	72.19	-5,422.1	-1,704.4	787.8	601.0	186.82	4.217		
13,400.0	7,770.0	13,298.6	7,530.0	101.0	103.8	72.19	-5,522.1	-1,704.4	787.8	597.7	190.12	4.144		
13,500.0	7,770.0	13,398.6	7,530.0	102.7	105.5	72.19	-5,622.1	-1,704.4	787.8	594.4	193.43	4.073		
13,600.0	7,770.0	13,498.6	7,530.0	104.4	107.1	72.19	-5,722.1	-1,704.4	787.8	591.1	196.74	4.004		
13,700.0	7,770.0	13,598.6	7,530.0	106.1	108.8	72.19	-5,822.1	-1,704.4	787.8	587.7	200.05	3.938		
13,800.0	7,770.0	13,698.6	7,530.0	107.8	110.5	72.19	-5,922.1	-1,704.4	787.8	584.4	203.37	3.874		
13,900.0	7,770.0	13,798.6	7,530.0	109.5	112.1	72.19	-6,022.1	-1,704.4	787.8	581.1	206.68	3.812		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		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)						
14,000.0	7,770.0	13,898.6	7,530.0	111.3	113.8	72.19	-6,122.1	-1,704.4	787.8	577.8	209.99	3.752		
14,100.0	7,770.0	13,998.6	7,530.0	113.0	115.5	72.19	-6,222.1	-1,704.4	787.8	574.5	213.31	3.693		
14,200.0	7,770.0	14,098.6	7,530.0	114.7	117.2	72.19	-6,322.1	-1,704.4	787.8	571.2	216.62	3.637		
14,300.0	7,770.0	14,198.6	7,530.0	116.4	118.9	72.19	-6,422.1	-1,704.4	787.8	567.9	219.94	3.582		
14,400.0	7,770.0	14,298.6	7,530.0	118.2	120.6	72.19	-6,522.1	-1,704.4	787.8	564.5	223.26	3.529		
14,500.0	7,770.0	14,398.6	7,530.0	119.9	122.3	72.19	-6,622.1	-1,704.4	787.8	561.2	226.58	3.477		
14,600.0	7,770.0	14,498.6	7,530.0	121.6	124.0	72.19	-6,722.1	-1,704.4	787.8	557.9	229.89	3.427		
14,700.0	7,770.0	14,598.6	7,530.0	123.3	125.6	72.19	-6,822.1	-1,704.4	787.8	554.6	233.21	3.378		
14,800.0	7,770.0	14,698.6	7,530.0	125.1	127.3	72.19	-6,922.1	-1,704.4	787.8	551.3	236.53	3.331		
14,900.0	7,770.0	14,798.6	7,530.0	126.8	129.0	72.19	-7,022.1	-1,704.4	787.8	547.9	239.85	3.285		
15,000.0	7,770.0	14,898.6	7,530.0	128.5	130.7	72.19	-7,122.1	-1,704.4	787.8	544.6	243.17	3.240		
15,100.0	7,770.0	14,998.6	7,530.0	130.2	132.4	72.19	-7,222.1	-1,704.4	787.8	541.3	246.50	3.196		
15,200.0	7,770.0	15,098.6	7,530.0	132.0	134.1	72.19	-7,322.1	-1,704.4	787.8	538.0	249.82	3.153		
15,300.0	7,770.0	15,198.6	7,530.0	133.7	135.8	72.19	-7,422.1	-1,704.4	787.8	534.7	253.14	3.112		
15,400.0	7,770.0	15,298.6	7,530.0	135.4	137.5	72.19	-7,522.1	-1,704.4	787.8	531.3	256.46	3.072		
15,500.0	7,770.0	15,398.6	7,530.0	137.2	139.3	72.19	-7,622.1	-1,704.4	787.8	528.0	259.79	3.032		
15,600.0	7,770.0	15,498.6	7,530.0	138.9	141.0	72.19	-7,722.1	-1,704.4	787.8	524.7	263.11	2.994		
15,700.0	7,770.0	15,598.6	7,530.0	140.6	142.7	72.19	-7,822.1	-1,704.4	787.8	521.4	266.44	2.957		
15,800.0	7,770.0	15,698.6	7,530.0	142.4	144.4	72.19	-7,922.1	-1,704.4	787.8	518.0	269.76	2.920		
15,900.0	7,770.0	15,798.6	7,530.0	144.1	146.1	72.19	-8,022.1	-1,704.4	787.8	514.7	273.09	2.885		
16,000.0	7,770.0	15,898.6	7,530.0	145.8	147.8	72.19	-8,122.1	-1,704.4	787.8	511.4	276.41	2.850		
16,100.0	7,770.0	15,998.6	7,530.0	147.6	149.5	72.19	-8,222.1	-1,704.4	787.8	508.1	279.74	2.816		
16,200.0	7,770.0	16,098.6	7,530.0	149.3	151.2	72.19	-8,322.1	-1,704.5	787.8	504.7	283.07	2.783		
16,300.0	7,770.0	16,198.6	7,530.0	151.0	152.9	72.19	-8,422.1	-1,704.5	787.8	501.4	286.39	2.751		
16,400.0	7,770.0	16,298.6	7,530.0	152.8	154.6	72.19	-8,522.1	-1,704.5	787.8	498.1	289.72	2.719		
16,500.0	7,770.0	16,398.6	7,530.0	154.5	156.4	72.19	-8,622.1	-1,704.5	787.8	494.8	293.05	2.688		
16,600.0	7,770.0	16,498.6	7,530.0	156.3	158.1	72.19	-8,722.1	-1,704.5	787.8	491.4	296.38	2.658		
16,700.0	7,770.0	16,598.6	7,530.0	158.0	159.8	72.19	-8,822.1	-1,704.5	787.8	488.1	299.71	2.629		
16,800.0	7,770.0	16,698.6	7,530.0	159.7	161.5	72.19	-8,922.1	-1,704.5	787.8	484.8	303.03	2.600		
16,900.0	7,770.0	16,798.6	7,530.0	161.5	163.2	72.19	-9,022.1	-1,704.5	787.8	481.4	306.36	2.571		
17,000.0	7,770.0	16,898.6	7,530.0	163.2	165.0	72.19	-9,122.1	-1,704.5	787.8	478.1	309.69	2.544		
17,100.0	7,770.0	16,998.6	7,530.0	164.9	166.7	72.19	-9,222.1	-1,704.5	787.8	474.8	313.02	2.517		
17,200.0	7,770.0	17,098.6	7,530.0	166.7	168.4	72.19	-9,322.1	-1,704.5	787.8	471.5	316.35	2.490		
17,300.0	7,770.0	17,198.6	7,530.0	168.4	170.1	72.19	-9,422.1	-1,704.5	787.8	468.1	319.68	2.464		
17,400.0	7,770.0	17,298.6	7,530.0	170.2	171.8	72.19	-9,522.1	-1,704.5	787.8	464.8	323.01	2.439		
17,500.0	7,770.0	17,398.6	7,530.0	171.9	173.6	72.19	-9,622.1	-1,704.5	787.8	461.5	326.34	2.414		
17,600.0	7,770.0	17,498.6	7,530.0	173.6	175.3	72.19	-9,722.1	-1,704.5	787.8	458.1	329.67	2.390		
17,658.2	7,770.0	17,556.8	7,530.0	174.7	176.3	72.19	-9,780.3	-1,704.5	787.8	456.2	331.61	2.376		
17,701.3	7,770.0	17,589.7	7,530.0	175.4	176.9	72.19	-9,813.2	-1,704.5	787.9	455.0	332.88	2.367 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	-88.95	0.4	-19.9	19.9					
100.0	100.0	101.0	101.0	0.2	0.2	-88.95	0.4	-19.9	19.9	19.6	0.31	65.066		
200.0	200.0	201.0	201.0	0.3	0.3	-88.95	0.4	-19.9	19.9	19.2	0.65	30.364		
232.0	232.0	233.0	233.0	0.4	0.4	-88.95	0.4	-19.9	19.9	19.1	0.77	25.938 CC		
300.0	300.0	300.8	300.8	0.5	0.5	-88.79	0.4	-20.1	20.1	19.1	1.00	20.027 ES		
350.0	350.0	350.7	350.6	0.6	0.6	-88.36	0.6	-20.7	20.7	19.6	1.18	17.598		
400.0	400.0	400.5	400.4	0.7	0.7	-19.73	0.9	-21.8	21.6	20.2	1.35	15.977		
500.0	500.0	500.0	499.9	0.9	0.9	-19.26	1.8	-25.1	23.4	21.7	1.70	13.740		
600.0	599.9	599.6	599.4	1.0	1.1	-19.32	3.1	-30.2	25.2	23.1	2.05	12.282		
700.0	699.8	699.2	698.7	1.2	1.3	-19.79	4.9	-36.9	27.0	24.6	2.40	11.264		
800.0	799.5	798.7	797.8	1.4	1.5	-20.60	7.2	-45.2	29.0	26.2	2.76	10.513		
900.0	899.2	898.2	896.8	1.6	1.7	-21.68	9.8	-55.2	30.9	27.8	3.11	9.937		
1,000.0	998.6	997.6	995.5	1.9	2.0	-22.96	13.0	-66.9	33.0	29.5	3.48	9.478		
1,100.0	1,097.9	1,097.0	1,093.9	2.1	2.3	-24.42	16.5	-80.2	35.1	31.3	3.86	9.098		
1,185.5	1,182.5	1,182.0	1,177.8	2.4	2.5	-25.76	19.9	-92.9	37.0	32.8	4.20	8.817		
1,200.0	1,196.9	1,196.4	1,192.1	2.4	2.6	-25.99	20.5	-95.2	37.4	33.1	4.26	8.776		
1,300.0	1,295.8	1,295.7	1,289.9	2.7	2.9	-26.94	25.0	-111.8	40.7	36.0	4.67	8.721		
1,400.0	1,394.8	1,394.9	1,387.3	3.0	3.3	-26.98	29.8	-130.0	45.6	40.6	5.07	9.003		
1,500.0	1,493.7	1,494.1	1,484.4	3.3	3.6	-26.39	35.1	-149.8	52.1	46.7	5.46	9.541		
1,600.0	1,592.6	1,593.9	1,581.9	3.6	4.0	-25.79	40.6	-170.0	59.0	53.2	5.86	10.076		
1,700.0	1,691.6	1,693.6	1,679.5	3.9	4.4	-25.33	46.0	-190.2	65.9	59.6	6.25	10.544		
1,800.0	1,790.5	1,793.4	1,777.0	4.2	4.8	-24.95	51.4	-210.5	72.8	66.1	6.64	10.956		
1,900.0	1,889.5	1,893.2	1,874.5	4.5	5.2	-24.63	56.8	-230.7	79.7	72.6	7.04	11.322		
2,000.0	1,988.4	1,992.9	1,972.1	4.8	5.6	-24.37	62.2	-251.0	86.6	79.1	7.43	11.649		
2,100.0	2,087.3	2,092.7	2,069.6	5.1	6.0	-24.14	67.6	-271.2	93.5	85.6	7.82	11.943		
2,200.0	2,186.3	2,192.5	2,167.1	5.4	6.4	-23.95	73.1	-291.5	100.3	92.1	8.22	12.208		
2,300.0	2,285.2	2,292.2	2,264.7	5.7	6.8	-23.78	78.5	-311.7	107.2	98.6	8.61	12.450		
2,400.0	2,384.2	2,392.0	2,362.2	6.0	7.2	-23.63	83.9	-332.0	114.1	105.1	9.01	12.670		
2,500.0	2,483.1	2,491.7	2,459.7	6.3	7.6	-23.50	89.3	-352.2	121.0	111.6	9.40	12.871		
2,600.0	2,582.0	2,591.5	2,557.3	6.6	8.0	-23.38	94.7	-372.5	127.9	118.1	9.80	13.056		
2,700.0	2,681.0	2,691.3	2,654.8	6.9	8.4	-23.27	100.2	-392.7	134.8	124.6	10.19	13.226		
2,800.0	2,779.9	2,791.0	2,752.3	7.2	8.8	-23.18	105.6	-412.9	141.7	131.1	10.59	13.384		
2,900.0	2,878.8	2,890.8	2,849.9	7.5	9.3	-23.09	111.0	-433.2	148.6	137.6	10.98	13.531		
3,000.0	2,977.8	2,990.5	2,947.4	7.8	9.7	-23.01	116.4	-453.4	155.5	144.1	11.38	13.667		
3,100.0	3,076.7	3,090.3	3,045.0	8.1	10.1	-22.94	121.8	-473.7	162.4	150.7	11.78	13.794		
3,200.0	3,175.7	3,190.1	3,142.5	8.4	10.5	-22.87	127.3	-493.9	169.3	157.2	12.17	13.912		
3,300.0	3,274.6	3,289.8	3,240.0	8.7	10.9	-22.81	132.7	-514.2	176.2	163.7	12.57	14.023		
3,400.0	3,373.5	3,389.6	3,337.6	9.1	11.3	-22.76	138.1	-534.4	183.1	170.2	12.96	14.128		
3,500.0	3,472.5	3,489.4	3,435.1	9.4	11.7	-22.70	143.5	-554.7	190.0	176.7	13.36	14.226		
3,600.0	3,571.4	3,589.1	3,532.6	9.7	12.1	-22.65	148.9	-574.9	196.9	183.2	13.75	14.318		
3,700.0	3,670.4	3,688.9	3,630.2	10.0	12.5	-22.61	154.4	-595.1	203.8	189.7	14.15	14.406		
3,800.0	3,769.3	3,788.6	3,727.7	10.3	12.9	-22.57	159.8	-615.4	210.7	196.2	14.54	14.488		
3,900.0	3,868.2	3,888.4	3,825.2	10.6	13.3	-22.53	165.2	-635.6	217.6	202.7	14.94	14.566		
4,000.0	3,967.2	3,988.2	3,922.8	10.9	13.8	-22.49	170.6	-655.9	224.5	209.2	15.34	14.640		
4,100.0	4,066.1	4,087.9	4,020.3	11.2	14.2	-22.45	176.0	-676.1	231.4	215.7	15.73	14.710		
4,200.0	4,165.1	4,187.7	4,117.8	11.5	14.6	-22.42	181.5	-696.4	238.3	222.2	16.13	14.777		
4,300.0	4,264.0	4,287.4	4,215.4	11.8	15.0	-22.39	186.9	-716.6	245.2	228.7	16.52	14.841		
4,400.0	4,362.9	4,387.2	4,312.9	12.1	15.4	-22.36	192.3	-736.9	252.1	235.2	16.92	14.901		
4,500.0	4,461.9	4,487.0	4,410.4	12.4	15.8	-22.33	197.7	-757.1	259.0	241.7	17.32	14.959		
4,600.0	4,560.8	4,586.7	4,508.0	12.8	16.2	-22.31	203.1	-777.4	265.9	248.2	17.71	15.014		
4,700.0	4,659.7	4,686.5	4,605.5	13.1	16.6	-22.28	208.5	-797.6	272.8	254.7	18.11	15.067		
4,800.0	4,758.7	4,786.3	4,703.1	13.4	17.0	-22.26	214.0	-817.8	279.7	261.2	18.50	15.118		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
4,900.0	4,857.6	4,886.0	4,800.6	13.7	17.4	-22.23	219.4	-838.1	286.6	267.7	18.90	15.166		
5,000.0	4,956.6	4,985.8	4,898.1	14.0	17.9	-22.21	224.8	-858.3	293.5	274.2	19.30	15.212		
5,100.0	5,055.5	5,085.5	4,995.7	14.3	18.3	-22.19	230.2	-878.6	300.4	280.7	19.69	15.257		
5,200.0	5,154.4	5,185.3	5,093.2	14.6	18.7	-22.17	235.6	-898.8	307.3	287.3	20.09	15.300		
5,300.0	5,253.4	5,285.1	5,190.7	14.9	19.1	-22.15	241.1	-919.1	314.2	293.8	20.48	15.341		
5,400.0	5,352.3	5,384.8	5,288.3	15.2	19.5	-22.14	246.5	-939.3	321.1	300.3	20.88	15.380		
5,500.0	5,451.3	5,484.6	5,385.8	15.5	19.9	-22.12	251.9	-959.6	328.0	306.8	21.28	15.418		
5,600.0	5,550.2	5,584.3	5,483.3	15.8	20.3	-22.10	257.3	-979.8	334.9	313.3	21.67	15.455		
5,700.0	5,649.1	5,684.1	5,580.9	16.1	20.7	-22.09	262.7	-1,000.0	341.8	319.8	22.07	15.490		
5,800.0	5,748.1	5,783.9	5,678.4	16.5	21.1	-22.07	268.2	-1,020.3	348.8	326.3	22.46	15.525		
5,900.0	5,847.0	5,883.6	5,775.9	16.8	21.6	-22.06	273.6	-1,040.5	355.7	332.8	22.86	15.557		
6,000.0	5,945.9	5,983.4	5,873.5	17.1	22.0	-22.04	279.0	-1,060.8	362.6	339.3	23.26	15.589		
6,100.0	6,044.9	6,083.2	5,971.0	17.4	22.4	-22.03	284.4	-1,081.0	369.5	345.8	23.65	15.620		
6,200.0	6,143.8	6,182.9	6,068.5	17.7	22.8	-22.02	289.8	-1,101.3	376.4	352.3	24.05	15.650		
6,300.0	6,242.8	6,282.7	6,166.1	18.0	23.2	-22.00	295.3	-1,121.5	383.3	358.8	24.45	15.678		
6,400.0	6,341.7	6,382.4	6,263.6	18.3	23.6	-21.99	300.7	-1,141.8	390.2	365.3	24.84	15.706		
6,500.0	6,440.6	6,482.2	6,361.2	18.6	24.0	-21.98	306.1	-1,162.0	397.1	371.8	25.24	15.733		
6,600.0	6,539.6	6,582.0	6,458.7	18.9	24.4	-21.97	311.5	-1,182.2	404.0	378.3	25.63	15.759		
6,700.0	6,638.5	6,681.7	6,556.2	19.2	24.8	-21.96	316.9	-1,202.5	410.9	384.8	26.03	15.785		
6,800.0	6,737.5	6,781.5	6,653.8	19.6	25.3	-21.95	322.4	-1,222.7	417.8	391.3	26.43	15.809		
6,900.0	6,836.4	6,881.2	6,751.3	19.9	25.7	-21.94	327.8	-1,243.0	424.7	397.8	26.82	15.833		
7,000.0	6,935.3	6,981.0	6,848.8	20.2	26.1	-21.93	333.2	-1,263.2	431.6	404.4	27.22	15.856		
7,087.6	7,022.0	7,068.4	6,934.3	20.4	26.4	-21.92	337.9	-1,281.0	437.6	410.1	27.57	15.876		
7,100.0	7,034.3	7,080.8	6,946.4	20.5	26.5	-15.43	338.6	-1,283.5	438.5	410.8	27.63	15.870		
7,150.0	7,083.8	7,130.6	6,995.1	20.6	26.7	13.35	341.3	-1,293.6	441.9	414.1	27.77	15.911		
7,200.0	7,133.2	7,180.2	7,043.5	20.7	26.9	37.21	343.9	-1,303.6	445.4	417.6	27.77	16.039		
7,250.0	7,182.3	7,230.1	7,092.5	20.8	27.1	52.39	343.9	-1,313.8	448.9	421.3	27.69	16.214		
7,300.0	7,230.8	7,280.6	7,141.8	20.9	27.3	61.82	340.5	-1,324.0	452.6	425.0	27.58	16.409		
7,350.0	7,278.4	7,331.6	7,191.2	21.0	27.4	68.05	333.3	-1,334.3	456.2	428.8	27.45	16.618		
7,400.0	7,325.0	7,383.1	7,240.5	21.0	27.6	72.45	322.5	-1,344.5	459.9	432.6	27.32	16.834		
7,450.0	7,370.3	7,435.2	7,289.4	21.1	27.7	75.74	308.0	-1,354.7	463.5	436.4	27.19	17.051		
7,500.0	7,414.0	7,487.8	7,337.7	21.1	27.8	78.29	289.6	-1,364.7	467.2	440.1	27.07	17.260		
7,550.0	7,456.1	7,540.9	7,384.9	21.2	28.0	80.35	267.4	-1,374.5	470.8	443.8	26.97	17.452		
7,600.0	7,496.2	7,594.6	7,430.9	21.2	28.1	82.04	241.5	-1,384.0	474.2	447.3	26.91	17.621		
7,650.0	7,534.2	7,648.8	7,475.3	21.2	28.2	83.46	211.7	-1,393.3	477.6	450.7	26.90	17.757		
7,700.0	7,569.9	7,703.5	7,517.7	21.3	28.3	84.67	178.3	-1,402.1	480.9	453.9	26.93	17.853		
7,750.0	7,603.1	7,758.7	7,557.9	21.4	28.4	85.69	141.4	-1,410.4	483.9	456.9	27.03	17.901		
7,800.0	7,633.7	7,814.4	7,595.4	21.4	28.5	86.57	101.0	-1,418.2	486.8	459.6	27.20	17.897		
7,850.0	7,661.5	7,870.6	7,630.1	21.5	28.6	87.33	57.4	-1,425.4	489.4	462.0	27.44	17.838		
7,900.0	7,686.3	7,927.2	7,661.5	21.6	28.8	87.97	10.8	-1,431.9	491.8	464.1	27.73	17.736		
7,950.0	7,708.1	7,984.2	7,689.4	21.8	28.9	88.50	-38.5	-1,437.7	493.9	465.8	28.12	17.567		
8,000.0	7,726.8	8,041.5	7,713.5	22.0	29.1	88.95	-90.2	-1,442.7	495.8	467.2	28.58	17.349		
8,050.0	7,742.1	8,099.1	7,733.6	22.2	29.3	89.30	-144.0	-1,446.9	497.3	468.2	29.11	17.085		
8,100.0	7,754.2	8,156.9	7,749.4	22.4	29.5	89.57	-199.5	-1,450.2	498.5	468.8	29.71	16.777		
8,150.0	7,762.9	8,214.9	7,760.8	22.6	29.7	89.75	-256.4	-1,452.5	499.3	469.0	30.39	16.434		
8,200.0	7,768.2	8,273.0	7,767.7	22.9	29.9	89.86	-314.0	-1,454.0	499.9	468.7	31.12	16.062		
8,251.3	7,770.0	8,332.5	7,770.0	23.2	30.2	89.89	-373.4	-1,454.4	500.0	468.1	31.93	15.661		
8,300.0	7,770.0	8,381.2	7,770.0	23.5	30.4	89.89	-422.1	-1,454.4	500.0	467.2	32.86	15.218		
8,400.0	7,770.0	8,481.2	7,770.0	24.2	31.0	89.89	-522.1	-1,454.4	500.0	465.1	34.94	14.310		
8,500.0	7,770.0	8,581.2	7,770.0	25.1	31.6	89.89	-622.1	-1,454.4	500.0	462.8	37.24	13.428		
8,600.0	7,770.0	8,681.2	7,770.0	26.0	32.4	89.89	-722.1	-1,454.4	500.0	460.3	39.71	12.592		
8,700.0	7,770.0	8,781.2	7,770.0	27.0	33.2	89.89	-822.1	-1,454.4	500.0	457.7	42.33	11.813		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)		Total Uncertainty Axis	Separation Factor	
8,800.0	7,770.0	8,881.2	7,770.0	28.1	34.1	89.89	-922.1	-1,454.4	500.0	454.9	45.07	11.094		
8,900.0	7,770.0	8,981.2	7,770.0	29.2	35.0	89.89	-1,022.1	-1,454.4	500.0	452.1	47.91	10.436		
9,000.0	7,770.0	9,081.2	7,770.0	30.5	36.0	89.89	-1,122.1	-1,454.4	500.0	449.2	50.84	9.836		
9,100.0	7,770.0	9,181.2	7,770.0	31.7	37.1	89.89	-1,222.1	-1,454.4	500.0	446.2	53.83	9.289		
9,200.0	7,770.0	9,281.2	7,770.0	33.0	38.2	89.89	-1,322.1	-1,454.4	500.0	443.1	56.88	8.790		
9,300.0	7,770.0	9,381.2	7,770.0	34.4	39.3	89.89	-1,422.1	-1,454.4	500.0	440.0	59.99	8.336		
9,400.0	7,770.0	9,481.2	7,770.0	35.7	40.5	89.89	-1,522.1	-1,454.4	500.0	436.9	63.13	7.920		
9,500.0	7,770.0	9,581.2	7,770.0	37.1	41.8	89.89	-1,622.1	-1,454.4	500.0	433.7	66.31	7.540		
9,600.0	7,770.0	9,681.2	7,770.0	38.6	43.1	89.89	-1,722.1	-1,454.4	500.0	430.5	69.53	7.192		
9,700.0	7,770.0	9,781.2	7,770.0	40.0	44.4	89.89	-1,822.1	-1,454.4	500.0	427.3	72.77	6.872		
9,800.0	7,770.0	9,881.2	7,770.0	41.5	45.7	89.89	-1,922.1	-1,454.4	500.0	424.0	76.03	6.577		
9,900.0	7,770.0	9,981.2	7,770.0	43.0	47.1	89.89	-2,022.1	-1,454.4	500.0	420.7	79.32	6.304		
10,000.0	7,770.0	10,081.2	7,770.0	44.6	48.5	89.89	-2,122.1	-1,454.4	500.0	417.4	82.62	6.052		
10,100.0	7,770.0	10,181.2	7,770.0	46.1	49.9	89.89	-2,222.1	-1,454.4	500.0	414.1	85.94	5.818		
10,200.0	7,770.0	10,281.2	7,770.0	47.7	51.3	89.89	-2,322.1	-1,454.4	500.0	410.7	89.27	5.601		
10,300.0	7,770.0	10,381.2	7,770.0	49.2	52.8	89.89	-2,422.1	-1,454.4	500.0	407.4	92.62	5.399		
10,400.0	7,770.0	10,481.2	7,770.0	50.8	54.3	89.89	-2,522.1	-1,454.4	500.0	404.0	95.98	5.210		
10,500.0	7,770.0	10,581.2	7,770.0	52.4	55.8	89.89	-2,622.1	-1,454.4	500.0	400.7	99.35	5.033		
10,600.0	7,770.0	10,681.2	7,770.0	54.0	57.3	89.89	-2,722.1	-1,454.4	500.0	397.3	102.73	4.868		
10,700.0	7,770.0	10,781.2	7,770.0	55.6	58.8	89.89	-2,822.1	-1,454.4	500.0	393.9	106.11	4.712		
10,800.0	7,770.0	10,881.2	7,770.0	57.2	60.3	89.89	-2,922.1	-1,454.4	500.0	390.5	109.51	4.566		
10,900.0	7,770.0	10,981.2	7,770.0	58.9	61.9	89.89	-3,022.1	-1,454.4	500.0	387.1	112.91	4.429		
11,000.0	7,770.0	11,081.2	7,770.0	60.5	63.4	89.89	-3,122.1	-1,454.4	500.0	383.7	116.31	4.299		
11,100.0	7,770.0	11,181.2	7,770.0	62.2	65.0	89.89	-3,222.1	-1,454.4	500.0	380.3	119.73	4.176		
11,200.0	7,770.0	11,281.2	7,770.0	63.8	66.6	89.89	-3,322.1	-1,454.4	500.0	376.9	123.15	4.060		
11,300.0	7,770.0	11,381.2	7,770.0	65.5	68.2	89.89	-3,422.1	-1,454.4	500.0	373.5	126.57	3.951		
11,400.0	7,770.0	11,481.2	7,770.0	67.1	69.8	89.89	-3,522.1	-1,454.4	500.0	370.0	130.00	3.846		
11,500.0	7,770.0	11,581.2	7,770.0	68.8	71.4	89.89	-3,622.1	-1,454.4	500.0	366.6	133.43	3.747		
11,600.0	7,770.0	11,681.2	7,770.0	70.4	73.0	89.89	-3,722.1	-1,454.4	500.0	363.2	136.87	3.653		
11,700.0	7,770.0	11,781.2	7,770.0	72.1	74.6	89.89	-3,822.1	-1,454.4	500.0	359.7	140.31	3.564		
11,800.0	7,770.0	11,881.2	7,770.0	73.8	76.2	89.89	-3,922.1	-1,454.4	500.0	356.3	143.75	3.478		
11,900.0	7,770.0	11,981.2	7,770.0	75.5	77.8	89.89	-4,022.1	-1,454.4	500.0	352.8	147.20	3.397		
12,000.0	7,770.0	12,081.2	7,770.0	77.1	79.5	89.89	-4,122.1	-1,454.4	500.0	349.4	150.64	3.319		
12,100.0	7,770.0	12,181.2	7,770.0	78.8	81.1	89.89	-4,222.1	-1,454.4	500.0	345.9	154.10	3.245		
12,200.0	7,770.0	12,281.2	7,770.0	80.5	82.7	89.89	-4,322.1	-1,454.4	500.0	342.5	157.55	3.174		
12,300.0	7,770.0	12,381.2	7,770.0	82.2	84.4	89.89	-4,422.1	-1,454.4	500.0	339.0	161.01	3.106		
12,400.0	7,770.0	12,481.2	7,770.0	83.9	86.0	89.89	-4,522.1	-1,454.4	500.0	335.6	164.46	3.040		
12,500.0	7,770.0	12,581.2	7,770.0	85.6	87.7	89.89	-4,622.1	-1,454.4	500.0	332.1	167.93	2.978		
12,600.0	7,770.0	12,681.2	7,770.0	87.3	89.3	89.89	-4,722.1	-1,454.4	500.0	328.6	171.39	2.917		
12,700.0	7,770.0	12,781.2	7,770.0	89.0	91.0	89.89	-4,822.1	-1,454.4	500.0	325.2	174.85	2.860		
12,800.0	7,770.0	12,881.2	7,770.0	90.7	92.7	89.89	-4,922.1	-1,454.4	500.0	321.7	178.32	2.804		
12,900.0	7,770.0	12,981.2	7,770.0	92.4	94.3	89.89	-5,022.1	-1,454.4	500.0	318.2	181.79	2.751		
13,000.0	7,770.0	13,081.2	7,770.0	94.1	96.0	89.89	-5,122.1	-1,454.4	500.0	314.8	185.25	2.699		
13,100.0	7,770.0	13,181.2	7,770.0	95.8	97.7	89.89	-5,222.1	-1,454.4	500.0	311.3	188.73	2.649		
13,200.0	7,770.0	13,281.2	7,770.0	97.5	99.4	89.89	-5,322.1	-1,454.4	500.0	307.8	192.20	2.602		
13,300.0	7,770.0	13,381.2	7,770.0	99.2	101.1	89.89	-5,422.1	-1,454.4	500.0	304.4	195.67	2.555		
13,400.0	7,770.0	13,481.2	7,770.0	101.0	102.7	89.89	-5,522.1	-1,454.4	500.0	300.9	199.15	2.511		
13,500.0	7,770.0	13,581.2	7,770.0	102.7	104.4	89.89	-5,622.1	-1,454.4	500.0	297.4	202.62	2.468		
13,600.0	7,770.0	13,681.2	7,770.0	104.4	106.1	89.89	-5,722.1	-1,454.4	500.0	293.9	206.10	2.426		
13,700.0	7,770.0	13,781.2	7,770.0	106.1	107.8	89.89	-5,822.1	-1,454.4	500.0	290.4	209.58	2.386		
13,800.0	7,770.0	13,881.2	7,770.0	107.8	109.5	89.89	-5,922.1	-1,454.4	500.0	287.0	213.05	2.347		
13,900.0	7,770.0	13,981.2	7,770.0	109.5	111.2	89.89	-6,022.1	-1,454.4	500.0	283.5	216.53	2.309		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		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)						
14,000.0	7,770.0	14,081.2	7,770.0	111.3	112.9	89.89	-6,122.1	-1,454.4	500.0	280.0	2.273			
14,100.0	7,770.0	14,181.2	7,770.0	113.0	114.6	89.89	-6,222.1	-1,454.4	500.0	276.5	2.237			
14,200.0	7,770.0	14,281.2	7,770.0	114.7	116.3	89.89	-6,322.1	-1,454.4	500.0	273.0	2.203			
14,300.0	7,770.0	14,381.2	7,770.0	116.4	118.0	89.89	-6,422.1	-1,454.4	500.0	269.6	2.170			
14,400.0	7,770.0	14,481.2	7,770.0	118.2	119.7	89.89	-6,522.1	-1,454.4	500.0	266.1	2.137			
14,500.0	7,770.0	14,581.2	7,770.0	119.9	121.4	89.89	-6,622.1	-1,454.4	500.0	262.6	2.106			
14,600.0	7,770.0	14,681.2	7,770.0	121.6	123.1	89.89	-6,722.1	-1,454.4	500.0	259.1	2.076			
14,700.0	7,770.0	14,781.2	7,770.0	123.3	124.8	89.89	-6,822.1	-1,454.4	500.0	255.6	2.046			
14,800.0	7,770.0	14,881.2	7,770.0	125.1	126.5	89.89	-6,922.1	-1,454.4	500.0	252.1	2.017			
14,900.0	7,770.0	14,981.2	7,770.0	126.8	128.2	89.89	-7,022.1	-1,454.4	500.0	248.6	1.989			
15,000.0	7,770.0	15,081.2	7,770.0	128.5	129.9	89.89	-7,122.1	-1,454.4	500.0	245.2	1.962			
15,100.0	7,770.0	15,181.2	7,770.0	130.2	131.6	89.89	-7,222.1	-1,454.4	500.0	241.7	1.935			
15,200.0	7,770.0	15,281.2	7,770.0	132.0	133.3	89.89	-7,322.1	-1,454.4	500.0	238.2	1.910			
15,300.0	7,770.0	15,381.2	7,770.0	133.7	135.1	89.89	-7,422.1	-1,454.4	500.0	234.7	1.885			
15,400.0	7,770.0	15,481.2	7,770.0	135.4	136.8	89.89	-7,522.1	-1,454.4	500.0	231.2	1.860			
15,500.0	7,770.0	15,581.2	7,770.0	137.2	138.5	89.89	-7,622.1	-1,454.4	500.0	227.7	1.836			
15,600.0	7,770.0	15,681.2	7,770.0	138.9	140.2	89.89	-7,722.1	-1,454.4	500.0	224.2	1.813			
15,700.0	7,770.0	15,781.2	7,770.0	140.6	141.9	89.89	-7,822.1	-1,454.4	500.0	220.7	1.790			
15,800.0	7,770.0	15,881.2	7,770.0	142.4	143.6	89.89	-7,922.1	-1,454.4	500.0	217.2	1.768			
15,900.0	7,770.0	15,981.2	7,770.0	144.1	145.4	89.89	-8,022.1	-1,454.4	500.0	213.8	1.747			
16,000.0	7,770.0	16,081.2	7,770.0	145.8	147.1	89.89	-8,122.1	-1,454.4	500.0	210.3	1.726			
16,100.0	7,770.0	16,181.2	7,770.0	147.6	148.8	89.89	-8,222.1	-1,454.4	500.0	206.8	1.705			
16,200.0	7,770.0	16,281.2	7,770.0	149.3	150.5	89.89	-8,322.1	-1,454.4	500.0	203.3	1.685			
16,300.0	7,770.0	16,381.2	7,770.0	151.0	152.2	89.89	-8,422.1	-1,454.4	500.0	199.8	1.665			
16,400.0	7,770.0	16,481.2	7,770.0	152.8	154.0	89.89	-8,522.1	-1,454.4	500.0	196.3	1.646			
16,500.0	7,770.0	16,581.2	7,770.0	154.5	155.7	89.89	-8,622.1	-1,454.4	500.0	192.8	1.628			
16,600.0	7,770.0	16,681.2	7,770.0	156.3	157.4	89.89	-8,722.1	-1,454.4	500.0	189.3	1.609			
16,700.0	7,770.0	16,781.2	7,770.0	158.0	159.1	89.89	-8,822.1	-1,454.4	500.0	185.8	1.591			
16,800.0	7,770.0	16,881.2	7,770.0	159.7	160.9	89.89	-8,922.1	-1,454.4	500.0	182.3	1.574			
16,900.0	7,770.0	16,981.2	7,770.0	161.5	162.6	89.89	-9,022.1	-1,454.4	500.0	178.8	1.557			
17,000.0	7,770.0	17,081.2	7,770.0	163.2	164.3	89.89	-9,122.1	-1,454.4	500.0	175.3	1.540			
17,100.0	7,770.0	17,181.2	7,770.0	164.9	166.0	89.89	-9,222.1	-1,454.4	500.0	171.8	1.524			
17,200.0	7,770.0	17,281.2	7,770.0	166.7	167.8	89.89	-9,322.1	-1,454.4	500.0	168.3	1.507			
17,300.0	7,770.0	17,381.2	7,770.0	168.4	169.5	89.89	-9,422.1	-1,454.4	500.0	164.8	1.492 Level 3			
17,400.0	7,770.0	17,481.2	7,770.0	170.2	171.2	89.89	-9,522.1	-1,454.4	500.0	161.3	1.476 Level 3			
17,500.0	7,770.0	17,581.2	7,770.0	171.9	173.0	89.89	-9,622.1	-1,454.4	500.0	157.8	1.461 Level 3			
17,600.0	7,770.0	17,681.2	7,770.0	173.6	174.7	89.89	-9,722.1	-1,454.4	500.0	154.3	1.446 Level 3			
17,659.7	7,770.0	17,740.8	7,770.0	174.7	175.7	89.89	-9,781.7	-1,454.4	500.0	152.3	1.438 Level 3			
17,701.3	7,770.0	17,775.9	7,770.0	175.4	176.3	89.89	-9,816.8	-1,454.4	500.1	151.0	1.432 Level 3, SF			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2														Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-9.8	9.8						
100.0	100.0	100.0	100.0	0.2	0.2	-90.00	0.0	-9.8	9.8	9.5	0.30	32.254			
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-9.8	9.8	9.1	0.65	15.006			
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-9.8	9.8	8.8	1.00	9.777 CC, ES			
350.0	350.0	349.9	349.9	0.6	0.6	-89.60	0.1	-10.0	10.0	8.8	1.18	8.502			
400.0	400.0	399.8	399.8	0.7	0.7	-20.76	0.3	-10.6	10.4	9.1	1.35	7.715			
500.0	500.0	499.6	499.6	0.9	0.9	-19.90	1.1	-13.1	11.3	9.6	1.70	6.637			
600.0	599.9	599.4	599.3	1.0	1.0	-19.60	2.5	-17.2	12.2	10.1	2.05	5.938			
700.0	699.8	699.2	698.9	1.2	1.2	-19.75	4.4	-23.0	13.1	10.7	2.40	5.450			
800.0	799.5	799.0	798.4	1.4	1.4	-20.27	6.9	-30.4	14.0	11.3	2.76	5.092			
900.0	899.2	898.8	897.7	1.6	1.7	-21.07	10.0	-39.4	15.0	11.9	3.12	4.817			
1,000.0	998.6	998.5	996.8	1.9	1.9	-22.11	13.6	-50.1	16.0	12.5	3.48	4.598			
1,100.0	1,097.9	1,098.2	1,095.6	2.1	2.2	-23.33	17.7	-62.4	17.1	13.2	3.86	4.417			
1,185.5	1,182.5	1,183.4	1,179.9	2.4	2.4	-24.49	21.7	-74.2	18.0	13.8	4.20	4.283			
1,200.0	1,196.9	1,197.9	1,194.3	2.4	2.5	-24.67	22.4	-76.3	18.2	13.9	4.25	4.266			
1,300.0	1,295.8	1,297.6	1,292.6	2.7	2.8	-24.76	27.7	-91.9	20.3	15.6	4.65	4.365			
1,400.0	1,394.8	1,397.5	1,390.9	3.0	3.1	-23.79	33.3	-108.5	23.5	18.5	5.03	4.675			
1,500.0	1,493.7	1,497.4	1,489.3	3.3	3.5	-23.02	38.9	-125.3	26.8	21.4	5.41	4.947			
1,600.0	1,592.6	1,597.4	1,587.6	3.6	3.8	-22.43	44.6	-142.0	30.0	24.2	5.79	5.184			
1,700.0	1,691.6	1,697.3	1,686.0	3.9	4.1	-21.95	50.2	-158.7	33.3	27.1	6.18	5.392			
1,800.0	1,790.5	1,797.3	1,784.4	4.2	4.5	-21.56	55.8	-175.4	36.6	30.0	6.56	5.577			
1,900.0	1,889.5	1,897.2	1,882.8	4.5	4.8	-21.23	61.5	-192.1	39.8	32.9	6.94	5.741			
2,000.0	1,988.4	1,997.2	1,981.2	4.8	5.2	-20.95	67.1	-208.8	43.1	35.8	7.32	5.887			
2,100.0	2,087.3	2,097.1	2,079.5	5.1	5.5	-20.71	72.7	-225.5	46.4	38.7	7.70	6.020			
2,200.0	2,186.3	2,197.0	2,177.9	5.4	5.9	-20.50	78.4	-242.2	49.6	41.6	8.08	6.140			
2,300.0	2,285.2	2,297.0	2,276.3	5.7	6.2	-20.32	84.0	-258.9	52.9	44.4	8.47	6.249			
2,400.0	2,384.2	2,396.9	2,374.7	6.0	6.6	-20.16	89.6	-275.6	56.2	47.3	8.85	6.349			
2,500.0	2,483.1	2,496.9	2,473.1	6.3	6.9	-20.02	95.3	-292.3	59.5	50.2	9.23	6.441			
2,600.0	2,582.0	2,596.8	2,571.4	6.6	7.3	-19.89	100.9	-309.0	62.7	53.1	9.61	6.525			
2,700.0	2,681.0	2,696.8	2,669.8	6.9	7.6	-19.77	106.5	-325.7	66.0	56.0	10.00	6.603			
2,800.0	2,779.9	2,796.7	2,768.2	7.2	8.0	-19.67	112.2	-342.4	69.3	58.9	10.38	6.675			
2,900.0	2,878.8	2,896.7	2,866.6	7.5	8.4	-19.57	117.8	-359.1	72.5	61.8	10.76	6.742			
3,000.0	2,977.8	2,996.6	2,965.0	7.8	8.7	-19.48	123.4	-375.8	75.8	64.7	11.14	6.804			
3,100.0	3,076.7	3,096.6	3,063.3	8.1	9.1	-19.40	129.1	-392.5	79.1	67.6	11.52	6.862			
3,200.0	3,175.7	3,196.5	3,161.7	8.4	9.4	-19.33	134.7	-409.2	82.4	70.4	11.91	6.917			
3,300.0	3,274.6	3,296.5	3,260.1	8.7	9.8	-19.26	140.3	-425.9	85.6	73.3	12.29	6.968			
3,400.0	3,373.5	3,396.4	3,358.5	9.1	10.1	-19.20	146.0	-442.7	88.9	76.2	12.67	7.016			
3,500.0	3,472.5	3,496.4	3,456.8	9.4	10.5	-19.14	151.6	-459.4	92.2	79.1	13.05	7.061			
3,600.0	3,571.4	3,596.3	3,555.2	9.7	10.8	-19.09	157.2	-476.1	95.4	82.0	13.44	7.104			
3,700.0	3,670.4	3,696.2	3,653.6	10.0	11.2	-19.04	162.9	-492.8	98.7	84.9	13.82	7.144			
3,800.0	3,769.3	3,796.2	3,752.0	10.3	11.5	-18.99	168.5	-509.5	102.0	87.8	14.20	7.182			
3,900.0	3,868.2	3,896.1	3,850.4	10.6	11.9	-18.94	174.1	-526.2	105.3	90.7	14.58	7.219			
4,000.0	3,967.2	3,996.1	3,948.7	10.9	12.3	-18.90	179.8	-542.9	108.5	93.6	14.97	7.253			
4,100.0	4,066.1	4,096.0	4,047.1	11.2	12.6	-18.86	185.4	-559.6	111.8	96.5	15.35	7.285			
4,200.0	4,165.1	4,196.0	4,145.5	11.5	13.0	-18.83	191.0	-576.3	115.1	99.4	15.73	7.316			
4,300.0	4,264.0	4,295.9	4,243.9	11.8	13.3	-18.79	196.7	-593.0	118.4	102.2	16.11	7.346			
4,400.0	4,362.9	4,395.9	4,342.3	12.1	13.7	-18.76	202.3	-609.7	121.6	105.1	16.50	7.374			
4,500.0	4,461.9	4,495.8	4,440.6	12.4	14.0	-18.73	207.9	-626.4	124.9	108.0	16.88	7.401			
4,600.0	4,560.8	4,595.8	4,539.0	12.8	14.4	-18.70	213.6	-643.1	128.2	110.9	17.26	7.427			
4,700.0	4,659.7	4,695.7	4,637.4	13.1	14.8	-18.67	219.2	-659.8	131.5	113.8	17.64	7.451			
4,800.0	4,758.7	4,795.7	4,735.8	13.4	15.1	-18.64	224.8	-676.5	134.7	116.7	18.03	7.475			
4,900.0	4,857.6	4,895.6	4,834.2	13.7	15.5	-18.61	230.5	-693.2	138.0	119.6	18.41	7.497			

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2											Offset Site Error: 0.0 ft		
Survey Program: 0-Geolink MWD											Offset Well Error: 0.0 ft		
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
5,000.0	4,956.6	4,995.5	4,932.5	14.0	15.8	-18.59	236.1	-709.9	141.3	122.5	18.79	7.519	
5,100.0	5,055.5	5,095.5	5,030.9	14.3	16.2	-18.57	241.7	-726.6	144.6	125.4	19.17	7.540	
5,200.0	5,154.4	5,195.4	5,129.3	14.6	16.5	-18.54	247.4	-743.3	147.8	128.3	19.56	7.559	
5,300.0	5,253.4	5,295.4	5,227.7	14.9	16.9	-18.52	253.0	-760.0	151.1	131.2	19.94	7.579	
5,400.0	5,352.3	5,395.3	5,326.1	15.2	17.2	-18.50	258.6	-776.8	154.4	134.1	20.32	7.597	
5,500.0	5,451.3	5,495.3	5,424.4	15.5	17.6	-18.48	264.3	-793.5	157.6	136.9	20.70	7.615	
5,600.0	5,550.2	5,595.2	5,522.8	15.8	18.0	-18.46	269.9	-810.2	160.9	139.8	21.09	7.632	
5,700.0	5,649.1	5,695.2	5,621.2	16.1	18.3	-18.45	275.5	-826.9	164.2	142.7	21.47	7.649	
5,800.0	5,748.1	5,795.1	5,719.6	16.5	18.7	-18.43	281.2	-843.6	167.5	145.6	21.85	7.664	
5,900.0	5,847.0	5,895.1	5,818.0	16.8	19.0	-18.41	286.8	-860.3	170.7	148.5	22.23	7.680	
6,000.0	5,945.9	5,995.0	5,916.3	17.1	19.4	-18.40	292.4	-877.0	174.0	151.4	22.62	7.695	
6,100.0	6,044.9	6,095.0	6,014.7	17.4	19.7	-18.38	298.1	-893.7	177.3	154.3	23.00	7.709	
6,200.0	6,143.8	6,194.9	6,113.1	17.7	20.1	-18.36	303.7	-910.4	180.6	157.2	23.38	7.723	
6,300.0	6,242.8	6,294.8	6,211.5	18.0	20.5	-18.35	309.3	-927.1	183.8	160.1	23.76	7.736	
6,400.0	6,341.7	6,394.8	6,309.8	18.3	20.8	-18.34	315.0	-943.8	187.1	163.0	24.15	7.749	
6,500.0	6,440.6	6,494.7	6,408.2	18.6	21.2	-18.32	320.6	-960.5	190.4	165.9	24.53	7.762	
6,600.0	6,539.6	6,594.7	6,506.6	18.9	21.5	-18.31	326.2	-977.2	193.7	168.8	24.91	7.774	
6,700.0	6,638.5	6,694.6	6,605.0	19.2	21.9	-18.30	331.9	-993.9	196.9	171.6	25.29	7.786	
6,800.0	6,737.5	6,794.6	6,703.4	19.6	22.2	-18.29	337.5	-1,010.6	200.2	174.5	25.68	7.798	
6,900.0	6,836.4	6,894.8	6,802.0	19.9	22.6	-18.33	342.9	-1,027.4	203.5	177.4	26.07	7.805	
7,000.0	6,935.3	6,995.2	6,900.8	20.2	22.9	-20.95	339.1	-1,044.2	206.5	179.5	26.98	7.652	
7,087.6	7,022.0	7,079.6	6,982.9	20.4	23.1	-26.02	325.1	-1,058.2	210.1	181.6	28.51	7.370	
7,100.0	7,034.3	7,091.2	6,994.0	20.5	23.1	-20.40	322.4	-1,060.1	210.9	182.1	28.79	7.324	
7,150.0	7,083.8	7,137.5	7,037.8	20.6	23.2	4.71	309.8	-1,067.7	214.3	184.4	29.87	7.174	
7,200.0	7,133.2	7,182.9	7,080.1	20.7	23.3	24.64	294.7	-1,074.9	218.5	187.7	30.86	7.083	
7,250.0	7,182.3	7,227.7	7,120.7	20.8	23.4	35.98	277.2	-1,081.9	223.4	191.7	31.69	7.051	
7,300.0	7,230.8	7,271.9	7,159.6	20.9	23.4	41.78	257.5	-1,088.7	228.8	196.5	32.33	7.078	
7,350.0	7,278.4	7,315.4	7,196.7	21.0	23.5	44.62	235.7	-1,095.1	234.6	201.9	32.76	7.162	
7,400.0	7,325.0	7,358.4	7,232.1	21.0	23.5	45.86	211.9	-1,101.2	240.7	207.8	32.97	7.302	
7,450.0	7,370.3	7,400.0	7,264.8	21.1	23.6	46.25	186.9	-1,106.9	247.0	214.1	32.94	7.498	
7,500.0	7,414.0	7,443.0	7,297.1	21.1	23.7	46.06	159.1	-1,112.5	253.4	220.7	32.71	7.746	
7,550.0	7,456.1	7,484.6	7,326.7	21.2	23.7	45.64	130.4	-1,117.7	259.7	227.4	32.27	8.048	
7,600.0	7,496.2	7,525.8	7,354.4	21.2	23.8	45.07	100.2	-1,122.6	265.9	234.3	31.65	8.403	
7,650.0	7,534.2	7,566.7	7,380.1	21.2	23.9	44.43	68.8	-1,127.2	272.0	241.1	30.87	8.812	
7,700.0	7,569.9	7,607.3	7,403.9	21.3	23.9	43.77	36.2	-1,131.4	277.8	247.9	29.95	9.275	
7,750.0	7,603.1	7,650.0	7,426.8	21.4	24.0	43.08	0.4	-1,135.5	283.3	254.3	29.01	9.768	
7,800.0	7,633.7	7,687.6	7,445.3	21.4	24.1	42.53	-32.2	-1,138.8	288.5	260.5	28.01	10.299	
7,850.0	7,661.5	7,727.4	7,463.0	21.5	24.3	41.97	-67.8	-1,142.0	293.2	266.2	26.99	10.861	
7,900.0	7,686.3	7,767.1	7,478.6	21.6	24.4	41.48	-104.0	-1,144.8	297.5	271.4	26.04	11.423	
7,950.0	7,708.1	7,806.5	7,492.2	21.8	24.5	41.04	-141.0	-1,147.3	301.3	276.1	25.22	11.949	
8,000.0	7,726.8	7,850.0	7,504.8	22.0	24.7	40.64	-182.5	-1,149.7	304.6	280.1	24.57	12.398	
8,050.0	7,742.1	7,885.0	7,513.1	22.2	24.8	40.38	-216.5	-1,151.3	307.4	283.2	24.19	12.708	
8,100.0	7,754.2	7,924.1	7,520.5	22.4	25.0	40.15	-254.9	-1,152.7	309.6	285.5	24.09	12.851	
8,150.0	7,762.9	7,963.1	7,525.7	22.6	25.2	39.99	-293.5	-1,153.8	311.2	286.9	24.32	12.795	
8,200.0	7,768.2	8,000.0	7,528.8	22.9	25.4	39.90	-330.3	-1,154.5	312.3	287.4	24.89	12.546	
8,251.3	7,770.0	8,042.2	7,530.0	23.2	25.6	39.88	-372.4	-1,155.0	312.8	286.9	25.85	12.100	
8,300.0	7,770.0	8,090.8	7,530.0	23.5	25.9	39.92	-421.0	-1,155.2	312.9	286.5	26.44	11.835	
8,400.0	7,770.0	8,190.8	7,530.0	24.2	26.6	39.99	-521.0	-1,155.7	313.3	285.5	27.76	11.285	
8,500.0	7,770.0	8,290.8	7,530.0	25.1	27.3	40.06	-621.0	-1,156.3	313.6	284.4	29.20	10.740	
8,600.0	7,770.0	8,390.8	7,530.0	26.0	28.2	40.14	-721.0	-1,156.8	313.9	283.2	30.75	10.210	
8,700.0	7,770.0	8,490.8	7,530.0	27.0	29.1	40.21	-821.0	-1,157.3	314.3	281.9	32.39	9.703	
8,800.0	7,770.0	8,590.8	7,530.0	28.1	30.1	40.28	-921.0	-1,157.8	314.6	280.5	34.11	9.222	

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
8,900.0	7,770.0	8,690.8	7,530.0	29.2	31.2	40.36	-1,021.0	-1,158.4	314.9	279.0	35.91	8.771		
9,000.0	7,770.0	8,790.8	7,530.0	30.5	32.3	40.43	-1,121.0	-1,158.9	315.3	277.5	37.77	8.349		
9,100.0	7,770.0	8,890.8	7,530.0	31.7	33.5	40.50	-1,221.0	-1,159.4	315.6	275.9	39.68	7.955		
9,200.0	7,770.0	8,990.8	7,530.0	33.0	34.7	40.57	-1,321.0	-1,159.9	316.0	274.3	41.64	7.589		
9,300.0	7,770.0	9,090.8	7,530.0	34.4	36.0	40.64	-1,421.0	-1,160.4	316.3	272.7	43.64	7.248		
9,400.0	7,770.0	9,190.8	7,530.0	35.7	37.3	40.72	-1,521.0	-1,161.0	316.6	271.0	45.68	6.932		
9,500.0	7,770.0	9,290.8	7,530.0	37.1	38.7	40.79	-1,621.0	-1,161.5	317.0	269.2	47.75	6.638		
9,600.0	7,770.0	9,390.8	7,530.0	38.6	40.1	40.86	-1,721.0	-1,162.0	317.3	267.5	49.86	6.365		
9,700.0	7,770.0	9,490.8	7,530.0	40.0	41.5	40.93	-1,821.0	-1,162.5	317.7	265.7	51.99	6.110		
9,800.0	7,770.0	9,590.8	7,530.0	41.5	42.9	41.00	-1,921.0	-1,163.1	318.0	263.9	54.15	5.873		
9,900.0	7,770.0	9,690.8	7,530.0	43.0	44.4	41.07	-2,021.0	-1,163.6	318.4	262.0	56.33	5.652		
10,000.0	7,770.0	9,790.8	7,530.0	44.6	45.9	41.14	-2,121.0	-1,164.1	318.7	260.2	58.53	5.445		
10,100.0	7,770.0	9,890.8	7,530.0	46.1	47.4	41.22	-2,221.0	-1,164.6	319.1	258.3	60.75	5.252		
10,200.0	7,770.0	9,990.8	7,530.0	47.7	48.9	41.29	-2,321.0	-1,165.2	319.4	256.4	62.99	5.070		
10,300.0	7,770.0	10,090.8	7,530.0	49.2	50.4	41.36	-2,421.0	-1,165.7	319.7	254.5	65.25	4.900		
10,400.0	7,770.0	10,190.8	7,530.0	50.8	52.0	41.43	-2,521.0	-1,166.2	320.1	252.6	67.52	4.740		
10,500.0	7,770.0	10,290.8	7,530.0	52.4	53.5	41.50	-2,621.0	-1,166.7	320.4	250.6	69.81	4.590		
10,600.0	7,770.0	10,390.8	7,530.0	54.0	55.1	41.57	-2,721.0	-1,167.3	320.8	248.7	72.11	4.448		
10,700.0	7,770.0	10,490.8	7,530.0	55.6	56.7	41.64	-2,821.0	-1,167.8	321.1	246.7	74.43	4.315		
10,800.0	7,770.0	10,590.8	7,530.0	57.2	58.3	41.71	-2,921.0	-1,168.3	321.5	244.7	76.76	4.188		
10,900.0	7,770.0	10,690.8	7,530.0	58.9	59.9	41.78	-3,021.0	-1,168.8	321.8	242.7	79.10	4.069		
11,000.0	7,770.0	10,790.8	7,530.0	60.5	61.5	41.85	-3,121.0	-1,169.3	322.2	240.7	81.45	3.955		
11,100.0	7,770.0	10,890.8	7,530.0	62.2	63.1	41.92	-3,221.0	-1,169.9	322.5	238.7	83.81	3.848		
11,200.0	7,770.0	10,990.8	7,530.0	63.8	64.7	41.98	-3,321.0	-1,170.4	322.9	236.7	86.19	3.746		
11,300.0	7,770.0	11,090.8	7,530.0	65.5	66.4	42.05	-3,421.0	-1,170.9	323.2	234.7	88.57	3.649		
11,400.0	7,770.0	11,190.8	7,530.0	67.1	68.0	42.12	-3,521.0	-1,171.4	323.6	232.6	90.97	3.557		
11,500.0	7,770.0	11,290.8	7,530.0	68.8	69.6	42.19	-3,621.0	-1,172.0	323.9	230.6	93.37	3.469		
11,600.0	7,770.0	11,390.8	7,530.0	70.4	71.3	42.26	-3,721.0	-1,172.5	324.3	228.5	95.79	3.385		
11,700.0	7,770.0	11,490.8	7,530.0	72.1	72.9	42.33	-3,820.9	-1,173.0	324.6	226.4	98.21	3.306		
11,800.0	7,770.0	11,590.8	7,530.0	73.8	74.6	42.40	-3,920.9	-1,173.5	325.0	224.3	100.64	3.229		
11,900.0	7,770.0	11,690.8	7,530.0	75.5	76.3	42.46	-4,020.9	-1,174.1	325.3	222.3	103.08	3.156		
12,000.0	7,770.0	11,790.8	7,530.0	77.1	77.9	42.53	-4,120.9	-1,174.6	325.7	220.2	105.53	3.086		
12,100.0	7,770.0	11,890.8	7,530.0	78.8	79.6	42.60	-4,220.9	-1,175.1	326.0	218.1	107.98	3.019		
12,200.0	7,770.0	11,990.8	7,530.0	80.5	81.3	42.67	-4,320.9	-1,175.6	326.4	216.0	110.45	2.955		
12,300.0	7,770.0	12,090.8	7,530.0	82.2	82.9	42.74	-4,420.9	-1,176.2	326.8	213.8	112.92	2.894		
12,400.0	7,770.0	12,190.8	7,530.0	83.9	84.6	42.80	-4,520.9	-1,176.7	327.1	211.7	115.40	2.835		
12,500.0	7,770.0	12,290.8	7,530.0	85.6	86.3	42.87	-4,620.9	-1,177.2	327.5	209.6	117.89	2.778		
12,600.0	7,770.0	12,390.8	7,530.0	87.3	88.0	42.94	-4,720.9	-1,177.7	327.8	207.4	120.38	2.723		
12,700.0	7,770.0	12,490.8	7,530.0	89.0	89.7	43.00	-4,820.9	-1,178.2	328.2	205.3	122.88	2.671		
12,800.0	7,770.0	12,590.8	7,530.0	90.7	91.4	43.07	-4,920.9	-1,178.8	328.5	203.1	125.39	2.620		
12,900.0	7,770.0	12,690.8	7,530.0	92.4	93.1	43.14	-5,020.9	-1,179.3	328.9	201.0	127.90	2.571		
13,000.0	7,770.0	12,790.8	7,530.0	94.1	94.8	43.20	-5,120.9	-1,179.8	329.3	198.8	130.43	2.524		
13,100.0	7,770.0	12,890.8	7,530.0	95.8	96.5	43.27	-5,220.9	-1,180.3	329.6	196.7	132.96	2.479		
13,200.0	7,770.0	12,990.7	7,530.0	97.5	98.2	43.34	-5,320.9	-1,180.9	330.0	194.5	135.49	2.435		
13,300.0	7,770.0	13,090.7	7,530.0	99.2	99.9	43.40	-5,420.9	-1,181.4	330.3	192.3	138.03	2.393		
13,400.0	7,770.0	13,190.7	7,530.0	101.0	101.6	43.47	-5,520.9	-1,181.9	330.7	190.1	140.58	2.352		
13,500.0	7,770.0	13,290.7	7,530.0	102.7	103.3	43.53	-5,620.9	-1,182.4	331.1	187.9	143.14	2.313		
13,600.0	7,770.0	13,390.7	7,530.0	104.4	105.0	43.60	-5,720.9	-1,183.0	331.4	185.7	145.70	2.275		
13,700.0	7,770.0	13,490.7	7,530.0	106.1	106.7	43.67	-5,820.9	-1,183.5	331.8	183.5	148.27	2.238		
13,800.0	7,770.0	13,590.7	7,530.0	107.8	108.4	43.73	-5,920.9	-1,184.0	332.1	181.3	150.84	2.202		
13,900.0	7,770.0	13,690.7	7,530.0	109.5	110.1	43.80	-6,020.9	-1,184.5	332.5	179.1	153.42	2.167		
14,000.0	7,770.0	13,790.7	7,530.0	111.3	111.8	43.86	-6,120.9	-1,185.1	332.9	176.9	156.01	2.134		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2												Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis		Separation Factor
14,100.0	7,770.0	13,890.7	7,530.0	113.0	113.5	43.93	-6,220.9	-1,185.6	333.2	174.6	158.60	2.101	
14,200.0	7,770.0	13,990.7	7,530.0	114.7	115.2	43.99	-6,320.9	-1,186.1	333.6	172.4	161.19	2.069	
14,300.0	7,770.0	14,090.7	7,530.0	116.4	117.0	44.06	-6,420.9	-1,186.6	334.0	170.2	163.80	2.039	
14,400.0	7,770.0	14,190.7	7,530.0	118.2	118.7	44.12	-6,520.9	-1,187.2	334.3	167.9	166.41	2.009	
14,500.0	7,770.0	14,290.7	7,530.0	119.9	120.4	44.18	-6,620.9	-1,187.7	334.7	165.7	169.02	1.980	
14,600.0	7,770.0	14,390.7	7,530.0	121.6	122.1	44.25	-6,720.9	-1,188.2	335.0	163.4	171.64	1.952	
14,700.0	7,770.0	14,490.7	7,530.0	123.3	123.8	44.31	-6,820.9	-1,188.7	335.4	161.1	174.27	1.925	
14,800.0	7,770.0	14,590.7	7,530.0	125.1	125.6	44.38	-6,920.9	-1,189.2	335.8	158.9	176.90	1.898	
14,900.0	7,770.0	14,690.7	7,530.0	126.8	127.3	44.44	-7,020.9	-1,189.8	336.1	156.6	179.54	1.872	
15,000.0	7,770.0	14,790.7	7,530.0	128.5	129.0	44.50	-7,120.9	-1,190.3	336.5	154.3	182.18	1.847	
15,100.0	7,770.0	14,890.7	7,530.0	130.2	130.7	44.57	-7,220.9	-1,190.8	336.9	152.1	184.83	1.823	
15,200.0	7,770.0	14,990.7	7,530.0	132.0	132.4	44.63	-7,320.9	-1,191.3	337.2	149.8	187.48	1.799	
15,300.0	7,770.0	15,090.7	7,530.0	133.7	134.2	44.69	-7,420.9	-1,191.9	337.6	147.5	190.14	1.776	
15,400.0	7,770.0	15,190.7	7,530.0	135.4	135.9	44.76	-7,520.8	-1,192.4	338.0	145.2	192.80	1.753	
15,500.0	7,770.0	15,290.7	7,530.0	137.2	137.6	44.82	-7,620.8	-1,192.9	338.4	142.9	195.47	1.731	
15,600.0	7,770.0	15,390.7	7,530.0	138.9	139.4	44.88	-7,720.8	-1,193.4	338.7	140.6	198.14	1.709	
15,700.0	7,770.0	15,490.7	7,530.0	140.6	141.1	44.95	-7,820.8	-1,194.0	339.1	138.3	200.82	1.689	
15,800.0	7,770.0	15,590.7	7,530.0	142.4	142.8	45.01	-7,920.8	-1,194.5	339.5	136.0	203.51	1.668	
15,900.0	7,770.0	15,690.7	7,530.0	144.1	144.5	45.07	-8,020.8	-1,195.0	339.8	133.6	206.20	1.648	
16,000.0	7,770.0	15,790.7	7,530.0	145.8	146.3	45.13	-8,120.8	-1,195.5	340.2	131.3	208.89	1.629	
16,100.0	7,770.0	15,890.7	7,530.0	147.6	148.0	45.19	-8,220.8	-1,196.1	340.6	129.0	211.59	1.610	
16,200.0	7,770.0	15,990.7	7,530.0	149.3	149.7	45.26	-8,320.8	-1,196.6	340.9	126.7	214.29	1.591	
16,300.0	7,770.0	16,090.7	7,530.0	151.0	151.5	45.32	-8,420.8	-1,197.1	341.3	124.3	217.00	1.573	
16,400.0	7,770.0	16,190.7	7,530.0	152.8	153.2	45.38	-8,520.8	-1,197.6	341.7	122.0	219.72	1.555	
16,500.0	7,770.0	16,290.7	7,530.0	154.5	154.9	45.44	-8,620.8	-1,198.1	342.1	119.6	222.43	1.538	
16,600.0	7,770.0	16,390.7	7,530.0	156.3	156.7	45.50	-8,720.8	-1,198.7	342.4	117.3	225.16	1.521	
16,700.0	7,770.0	16,490.7	7,530.0	158.0	158.4	45.56	-8,820.8	-1,199.2	342.8	114.9	227.89	1.504	
16,800.0	7,770.0	16,590.7	7,530.0	159.7	160.1	45.63	-8,920.8	-1,199.7	343.2	112.6	230.62	1.488 Level 3	
16,900.0	7,770.0	16,690.7	7,530.0	161.5	161.9	45.69	-9,020.8	-1,200.2	343.6	110.2	233.36	1.472 Level 3	
17,000.0	7,770.0	16,790.7	7,530.0	163.2	163.6	45.75	-9,120.8	-1,200.8	343.9	107.8	236.10	1.457 Level 3	
17,100.0	7,770.0	16,890.7	7,530.0	164.9	165.3	45.81	-9,220.8	-1,201.3	344.3	105.5	238.85	1.442 Level 3	
17,200.0	7,770.0	16,990.7	7,530.0	166.7	167.1	45.87	-9,320.8	-1,201.8	344.7	103.1	241.60	1.427 Level 3	
17,300.0	7,770.0	17,090.7	7,530.0	168.4	168.8	45.93	-9,420.8	-1,202.3	345.1	100.7	244.35	1.412 Level 3	
17,400.0	7,770.0	17,190.7	7,530.0	170.2	170.5	45.99	-9,520.8	-1,202.9	345.4	98.3	247.11	1.398 Level 3	
17,500.0	7,770.0	17,290.7	7,530.0	171.9	172.3	46.05	-9,620.8	-1,203.4	345.8	95.9	249.88	1.384 Level 3	
17,600.0	7,770.0	17,390.7	7,530.0	173.6	174.0	46.11	-9,720.8	-1,203.9	346.2	93.5	252.65	1.370 Level 3	
17,701.3	7,770.0	17,490.0	7,530.0	175.4	175.7	46.17	-9,820.1	-1,204.4	346.6	91.1	255.43	1.357 Level 3, SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	10.1	10.1					
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	10.1	10.1	9.8	0.30	33.175		
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	10.1	10.1	9.4	0.65	15.434		
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	10.1	10.1	9.1	1.00	10.057		
350.0	350.0	350.0	350.0	0.6	0.6	90.00	0.0	10.1	10.1	8.9	1.18	8.565 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	158.61	0.0	10.1	10.3	8.9	1.35	7.608		
500.0	500.0	500.2	500.2	0.9	0.9	159.78	0.4	9.3	11.1	9.4	1.70	6.548		
600.0	599.9	600.3	600.3	1.0	1.0	159.90	1.7	7.0	12.1	10.0	2.05	5.884		
700.0	699.8	700.5	700.4	1.2	1.2	159.20	3.7	3.1	13.1	10.7	2.40	5.441		
800.0	799.5	800.7	800.4	1.4	1.4	157.86	6.7	-2.3	14.2	11.4	2.76	5.133		
900.0	899.2	900.9	900.3	1.6	1.6	156.05	10.4	-9.2	15.4	12.2	3.13	4.911		
1,000.0	998.6	1,001.2	1,000.1	1.9	1.8	153.89	15.0	-17.7	16.6	13.1	3.51	4.747		
1,100.0	1,097.9	1,101.4	1,099.6	2.1	2.1	151.55	20.4	-27.6	18.1	14.2	3.91	4.630		
1,185.5	1,182.5	1,186.8	1,184.5	2.4	2.3	150.99	25.2	-36.6	20.1	15.9	4.25	4.739		
1,200.0	1,196.9	1,201.3	1,198.9	2.4	2.3	151.05	26.0	-38.1	20.6	16.3	4.31	4.778		
1,300.0	1,295.8	1,301.3	1,298.1	2.7	2.6	151.42	31.6	-48.5	23.7	18.9	4.71	5.021		
1,400.0	1,394.8	1,401.2	1,397.4	3.0	2.8	151.71	37.3	-59.0	26.7	21.6	5.11	5.223		
1,500.0	1,493.7	1,501.2	1,496.6	3.3	3.1	151.93	42.9	-69.4	29.8	24.3	5.52	5.395		
1,600.0	1,592.6	1,601.1	1,595.9	3.6	3.4	152.12	48.5	-79.9	32.8	26.9	5.93	5.541		
1,700.0	1,691.6	1,701.1	1,695.1	3.9	3.6	152.27	54.2	-90.3	35.9	29.6	6.34	5.668		
1,800.0	1,790.5	1,801.1	1,794.4	4.2	3.9	152.40	59.8	-100.7	39.0	32.2	6.74	5.778		
1,900.0	1,889.5	1,901.0	1,893.6	4.5	4.1	152.51	65.5	-111.2	42.0	34.9	7.15	5.876		
2,000.0	1,988.4	2,001.0	1,992.8	4.8	4.4	152.60	71.1	-121.6	45.1	37.5	7.56	5.962		
2,100.0	2,087.3	2,100.9	2,092.1	5.1	4.7	152.69	76.7	-132.1	48.2	40.2	7.98	6.039		
2,200.0	2,186.3	2,200.9	2,191.3	5.4	4.9	152.76	82.4	-142.5	51.2	42.8	8.39	6.108		
2,300.0	2,285.2	2,300.8	2,290.6	5.7	5.2	152.82	88.0	-153.0	54.3	45.5	8.80	6.171		
2,400.0	2,384.2	2,400.8	2,389.8	6.0	5.5	152.88	93.7	-163.4	57.4	48.2	9.21	6.227		
2,500.0	2,483.1	2,500.7	2,489.1	6.3	5.7	152.93	99.3	-173.9	60.4	50.8	9.62	6.279		
2,600.0	2,582.0	2,600.7	2,588.3	6.6	6.0	152.98	104.9	-184.3	63.5	53.5	10.04	6.326		
2,700.0	2,681.0	2,700.6	2,687.6	6.9	6.3	153.02	110.6	-194.8	66.6	56.1	10.45	6.370		
2,800.0	2,779.9	2,800.6	2,786.8	7.2	6.6	153.06	116.2	-205.2	69.6	58.8	10.86	6.410		
2,900.0	2,878.8	2,900.5	2,886.1	7.5	6.8	153.10	121.9	-215.6	72.7	61.4	11.28	6.447		
3,000.0	2,977.8	3,000.5	2,985.3	7.8	7.1	153.13	127.5	-226.1	75.8	64.1	11.69	6.481		
3,100.0	3,076.7	3,100.4	3,084.5	8.1	7.4	153.16	133.1	-236.5	78.8	66.7	12.10	6.513		
3,200.0	3,175.7	3,200.4	3,183.8	8.4	7.6	153.19	138.8	-247.0	81.9	69.4	12.52	6.542		
3,300.0	3,274.6	3,300.3	3,283.0	8.7	7.9	153.22	144.4	-257.4	85.0	72.0	12.93	6.570		
3,400.0	3,373.5	3,400.3	3,382.3	9.1	8.2	153.24	150.1	-267.9	88.0	74.7	13.34	6.596		
3,500.0	3,472.5	3,500.3	3,481.5	9.4	8.4	153.26	155.7	-278.3	91.1	77.3	13.76	6.620		
3,600.0	3,571.4	3,600.2	3,580.8	9.7	8.7	153.28	161.3	-288.8	94.1	80.0	14.17	6.643		
3,700.0	3,670.4	3,700.2	3,680.0	10.0	9.0	153.30	167.0	-299.2	97.2	82.6	14.59	6.665		
3,800.0	3,769.3	3,800.1	3,779.3	10.3	9.3	153.32	172.6	-309.7	100.3	85.3	15.00	6.685		
3,900.0	3,868.2	3,900.1	3,878.5	10.6	9.5	153.34	178.3	-320.1	103.3	87.9	15.41	6.704		
4,000.0	3,967.2	4,000.0	3,977.8	10.9	9.8	153.36	183.9	-330.5	106.4	90.6	15.83	6.722		
4,100.0	4,066.1	4,100.0	4,077.0	11.2	10.1	153.37	189.5	-341.0	109.5	93.2	16.24	6.740		
4,200.0	4,165.1	4,199.9	4,176.2	11.5	10.3	153.39	195.2	-351.4	112.5	95.9	16.66	6.756		
4,300.0	4,264.0	4,299.9	4,275.5	11.8	10.6	153.40	200.8	-361.9	115.6	98.5	17.07	6.772		
4,400.0	4,362.9	4,399.8	4,374.7	12.1	10.9	153.41	206.4	-372.3	118.7	101.2	17.49	6.786		
4,500.0	4,461.9	4,499.8	4,474.0	12.4	11.1	153.43	212.1	-382.8	121.7	103.8	17.90	6.800		
4,600.0	4,560.8	4,599.7	4,573.2	12.8	11.4	153.44	217.7	-393.2	124.8	106.5	18.32	6.814		
4,700.0	4,659.7	4,699.7	4,672.5	13.1	11.7	153.45	223.4	-403.7	127.9	109.1	18.73	6.827		
4,800.0	4,758.7	4,799.6	4,771.7	13.4	12.0	153.46	229.0	-414.1	130.9	111.8	19.15	6.839		
4,900.0	4,857.6	4,899.6	4,871.0	13.7	12.2	153.47	234.6	-424.5	134.0	114.4	19.56	6.851		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,000.0	4,956.6	4,999.5	4,970.2	14.0	12.5	153.48	240.3	-435.0	137.1	117.1	19.98	6.862		
5,100.0	5,055.5	5,099.5	5,069.5	14.3	12.8	153.49	245.9	-445.4	140.1	119.7	20.39	6.873		
5,200.0	5,154.4	5,199.5	5,168.7	14.6	13.0	153.50	251.6	-455.9	143.2	122.4	20.80	6.883		
5,300.0	5,253.4	5,299.4	5,268.0	14.9	13.3	153.51	257.2	-466.3	146.3	125.0	21.22	6.893		
5,400.0	5,352.3	5,399.4	5,367.2	15.2	13.6	153.51	262.8	-476.8	149.3	127.7	21.63	6.902		
5,500.0	5,451.3	5,499.3	5,466.4	15.5	13.9	153.52	268.5	-487.2	152.4	130.3	22.05	6.912		
5,600.0	5,550.2	5,599.3	5,565.7	15.8	14.1	153.53	274.1	-497.7	155.5	133.0	22.46	6.920		
5,700.0	5,649.1	5,699.2	5,664.9	16.1	14.4	153.54	279.8	-508.1	158.5	135.6	22.88	6.929		
5,800.0	5,748.1	5,799.2	5,764.2	16.5	14.7	153.54	285.4	-518.6	161.6	138.3	23.29	6.937		
5,900.0	5,847.0	5,899.1	5,863.4	16.8	14.9	153.55	291.0	-529.0	164.7	140.9	23.71	6.945		
6,000.0	5,945.9	5,999.1	5,962.7	17.1	15.2	153.56	296.7	-539.4	167.7	143.6	24.12	6.952		
6,100.0	6,044.9	6,099.0	6,061.9	17.4	15.5	153.56	302.3	-549.9	170.8	146.2	24.54	6.960		
6,200.0	6,143.8	6,199.0	6,161.2	17.7	15.8	153.57	308.0	-560.3	173.9	148.9	24.95	6.967		
6,300.0	6,242.8	6,298.9	6,260.4	18.0	16.0	153.58	313.6	-570.8	176.9	151.6	25.37	6.974		
6,400.0	6,341.7	6,398.9	6,359.7	18.3	16.3	153.58	319.2	-581.2	180.0	154.2	25.78	6.980		
6,500.0	6,440.6	6,498.8	6,458.9	18.6	16.6	153.59	324.9	-591.7	183.1	156.9	26.20	6.987		
6,600.0	6,539.6	6,598.8	6,558.1	18.9	16.8	153.59	330.5	-602.1	186.1	159.5	26.61	6.993		
6,700.0	6,638.5	6,698.7	6,657.4	19.2	17.1	153.60	336.2	-612.6	189.2	162.2	27.03	6.999		
6,800.0	6,737.5	6,798.7	6,756.6	19.6	17.4	153.60	341.8	-623.0	192.2	164.8	27.44	7.005		
6,900.0	6,836.4	6,900.1	6,857.4	19.9	17.6	154.93	343.0	-633.6	195.0	167.5	27.52	7.087		
7,000.0	6,935.3	6,998.9	6,954.8	20.2	17.8	160.06	330.7	-643.9	197.8	171.1	26.71	7.407		
7,087.6	7,022.0	7,080.2	7,033.1	20.4	17.8	166.96	310.6	-652.1	203.0	177.3	25.73	7.891		
7,100.0	7,034.3	7,091.3	7,043.6	20.5	17.8	174.67	307.2	-653.2	204.2	178.6	25.60	7.975		
7,150.0	7,083.8	7,135.3	7,084.7	20.6	17.8	-152.09	291.9	-657.5	209.5	184.3	25.24	8.302		
7,200.0	7,133.2	7,178.6	7,124.0	20.7	17.9	-124.50	274.5	-661.7	216.0	190.9	25.13	8.595		
7,250.0	7,182.3	7,221.0	7,161.6	20.8	17.9	-105.99	255.1	-665.6	223.4	198.1	25.25	8.847		
7,300.0	7,230.8	7,262.8	7,197.4	20.9	17.9	-93.56	233.9	-669.4	231.5	205.9	25.53	9.065		
7,350.0	7,278.4	7,303.9	7,231.3	21.0	17.9	-84.63	211.0	-673.0	240.1	214.1	25.92	9.263		
7,400.0	7,325.0	7,344.5	7,263.5	21.0	17.9	-77.82	186.5	-676.4	249.0	222.6	26.33	9.454		
7,450.0	7,370.3	7,384.5	7,293.8	21.1	17.9	-72.41	160.6	-679.6	258.0	231.3	26.74	9.650		
7,500.0	7,414.0	7,424.1	7,322.4	21.1	17.9	-67.98	133.4	-682.6	267.0	240.0	27.08	9.860		
7,550.0	7,456.1	7,463.2	7,349.1	21.2	17.9	-64.28	104.9	-685.4	275.9	248.6	27.34	10.091		
7,600.0	7,496.2	7,500.0	7,372.7	21.2	18.0	-61.22	76.8	-687.9	284.6	257.1	27.48	10.356		
7,650.0	7,534.2	7,540.4	7,397.0	21.2	18.0	-58.48	44.7	-690.4	293.0	265.4	27.59	10.620		
7,700.0	7,569.9	7,578.5	7,418.2	21.3	18.1	-56.20	13.1	-692.6	300.9	273.4	27.52	10.933		
7,750.0	7,603.1	7,616.3	7,437.6	21.4	18.2	-54.23	-19.3	-694.7	308.3	280.9	27.42	11.247		
7,800.0	7,633.7	7,650.0	7,453.4	21.4	18.3	-52.62	-49.0	-696.3	315.3	288.1	27.21	11.588		
7,850.0	7,661.5	7,691.2	7,470.8	21.5	18.4	-51.11	-86.3	-698.2	321.5	294.6	26.98	11.919		
7,900.0	7,686.3	7,728.4	7,484.7	21.6	18.5	-49.90	-120.7	-699.6	327.2	300.5	26.68	12.266		
7,950.0	7,708.1	7,765.4	7,496.7	21.8	18.7	-48.87	-155.7	-700.9	332.2	305.8	26.35	12.608		
8,000.0	7,726.8	7,800.0	7,506.3	22.0	18.9	-48.05	-188.9	-701.9	336.5	310.5	25.99	12.945		
8,050.0	7,742.1	7,838.9	7,515.2	22.2	19.1	-47.36	-226.8	-702.8	340.0	314.3	25.68	13.241		
8,100.0	7,754.2	7,875.6	7,521.7	22.4	19.3	-46.84	-262.9	-703.5	342.8	317.4	25.38	13.508		
8,150.0	7,762.9	7,912.2	7,526.3	22.6	19.5	-46.47	-299.2	-704.0	344.8	319.7	25.12	13.726		
8,200.0	7,768.2	7,950.0	7,529.1	22.9	19.7	-46.25	-336.9	-704.3	346.1	321.2	24.94	13.879		
8,251.3	7,770.0	7,986.5	7,530.0	23.2	20.0	-46.17	-373.4	-704.4	346.6	321.8	24.81	13.969		
8,300.0	7,770.0	8,035.2	7,530.0	23.5	20.4	-46.17	-422.1	-704.4	346.6	321.0	25.53	13.577		
8,400.0	7,770.0	8,135.2	7,530.0	24.2	21.2	-46.17	-522.1	-704.4	346.6	319.5	27.10	12.789		
8,500.0	7,770.0	8,235.2	7,530.0	25.1	22.1	-46.17	-622.1	-704.4	346.6	317.8	28.81	12.029		
8,600.0	7,770.0	8,335.2	7,530.0	26.0	23.2	-46.17	-722.1	-704.4	346.6	315.9	30.64	11.312		
8,700.0	7,770.0	8,435.2	7,530.0	27.0	24.3	-46.17	-822.1	-704.4	346.6	314.0	32.56	10.643		
8,800.0	7,770.0	8,535.2	7,530.0	28.1	25.5	-46.17	-922.1	-704.4	346.6	312.0	34.57	10.026		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)				Between Ellipses (ft)	
8,900.0	7,770.0	8,635.2	7,530.0	29.2	26.8	-46.17	-1,022.1	-704.4	346.6	309.9	36.64	9.459		
9,000.0	7,770.0	8,735.2	7,530.0	30.5	28.1	-46.17	-1,122.1	-704.4	346.6	307.8	38.77	8.940		
9,100.0	7,770.0	8,835.2	7,530.0	31.7	29.4	-46.17	-1,222.1	-704.4	346.6	305.6	40.94	8.465		
9,200.0	7,770.0	8,935.2	7,530.0	33.0	30.8	-46.17	-1,322.1	-704.4	346.6	303.4	43.16	8.030		
9,300.0	7,770.0	9,035.2	7,530.0	34.4	32.3	-46.17	-1,422.1	-704.4	346.6	301.2	45.41	7.632		
9,400.0	7,770.0	9,135.2	7,530.0	35.7	33.7	-46.17	-1,522.1	-704.4	346.6	298.9	47.69	7.267		
9,500.0	7,770.0	9,235.2	7,530.0	37.1	35.2	-46.17	-1,622.1	-704.4	346.6	296.6	50.00	6.932		
9,600.0	7,770.0	9,335.2	7,530.0	38.6	36.7	-46.17	-1,722.1	-704.4	346.6	294.2	52.32	6.623		
9,700.0	7,770.0	9,435.2	7,530.0	40.0	38.3	-46.17	-1,822.1	-704.4	346.6	291.9	54.67	6.339		
9,800.0	7,770.0	9,535.2	7,530.0	41.5	39.8	-46.17	-1,922.1	-704.4	346.6	289.5	57.04	6.076		
9,900.0	7,770.0	9,635.2	7,530.0	43.0	41.4	-46.17	-2,022.1	-704.4	346.6	287.1	59.42	5.833		
10,000.0	7,770.0	9,735.2	7,530.0	44.6	43.0	-46.17	-2,122.1	-704.4	346.6	284.8	61.81	5.607		
10,100.0	7,770.0	9,835.2	7,530.0	46.1	44.6	-46.17	-2,222.1	-704.4	346.6	282.3	64.21	5.397		
10,200.0	7,770.0	9,935.2	7,530.0	47.7	46.2	-46.17	-2,322.1	-704.4	346.6	279.9	66.63	5.201		
10,300.0	7,770.0	10,035.2	7,530.0	49.2	47.8	-46.17	-2,422.1	-704.4	346.6	277.5	69.05	5.019		
10,400.0	7,770.0	10,135.2	7,530.0	50.8	49.4	-46.17	-2,522.1	-704.4	346.6	275.1	71.49	4.848		
10,500.0	7,770.0	10,235.2	7,530.0	52.4	51.1	-46.17	-2,622.1	-704.4	346.6	272.6	73.93	4.688		
10,600.0	7,770.0	10,335.2	7,530.0	54.0	52.7	-46.17	-2,722.1	-704.4	346.6	270.2	76.37	4.538		
10,700.0	7,770.0	10,435.2	7,530.0	55.6	54.3	-46.17	-2,822.1	-704.4	346.6	267.7	78.83	4.397		
10,800.0	7,770.0	10,535.2	7,530.0	57.2	56.0	-46.17	-2,922.1	-704.4	346.6	265.3	81.28	4.264		
10,900.0	7,770.0	10,635.2	7,530.0	58.9	57.7	-46.17	-3,022.1	-704.4	346.6	262.8	83.75	4.138		
11,000.0	7,770.0	10,735.2	7,530.0	60.5	59.3	-46.17	-3,122.1	-704.4	346.6	260.3	86.22	4.020		
11,100.0	7,770.0	10,835.2	7,530.0	62.2	61.0	-46.17	-3,222.1	-704.4	346.6	257.9	88.69	3.908		
11,200.0	7,770.0	10,935.2	7,530.0	63.8	62.7	-46.17	-3,322.1	-704.4	346.6	255.4	91.17	3.801		
11,300.0	7,770.0	11,035.2	7,530.0	65.5	64.4	-46.17	-3,422.1	-704.4	346.6	252.9	93.65	3.701		
11,400.0	7,770.0	11,135.2	7,530.0	67.1	66.0	-46.17	-3,522.1	-704.4	346.6	250.4	96.13	3.605		
11,500.0	7,770.0	11,235.2	7,530.0	68.8	67.7	-46.17	-3,622.1	-704.4	346.6	247.9	98.62	3.514		
11,600.0	7,770.0	11,335.2	7,530.0	70.4	69.4	-46.17	-3,722.1	-704.4	346.6	245.5	101.11	3.428		
11,700.0	7,770.0	11,435.2	7,530.0	72.1	71.1	-46.17	-3,822.1	-704.4	346.6	243.0	103.60	3.345		
11,800.0	7,770.0	11,535.2	7,530.0	73.8	72.8	-46.17	-3,922.1	-704.4	346.6	240.5	106.10	3.266		
11,900.0	7,770.0	11,635.2	7,530.0	75.5	74.5	-46.17	-4,022.1	-704.4	346.6	238.0	108.60	3.191		
12,000.0	7,770.0	11,735.2	7,530.0	77.1	76.2	-46.17	-4,122.1	-704.4	346.6	235.5	111.10	3.120		
12,100.0	7,770.0	11,835.2	7,530.0	78.8	77.9	-46.17	-4,222.1	-704.4	346.6	233.0	113.60	3.051		
12,200.0	7,770.0	11,935.2	7,530.0	80.5	79.6	-46.17	-4,322.1	-704.4	346.6	230.5	116.10	2.985		
12,300.0	7,770.0	12,035.2	7,530.0	82.2	81.3	-46.17	-4,422.1	-704.4	346.6	228.0	118.61	2.922		
12,400.0	7,770.0	12,135.2	7,530.0	83.9	83.0	-46.17	-4,522.1	-704.4	346.6	225.4	121.11	2.861		
12,500.0	7,770.0	12,235.2	7,530.0	85.6	84.8	-46.17	-4,622.1	-704.4	346.6	222.9	123.62	2.803		
12,600.0	7,770.0	12,335.2	7,530.0	87.3	86.5	-46.17	-4,722.1	-704.4	346.6	220.4	126.13	2.748		
12,700.0	7,770.0	12,435.2	7,530.0	89.0	88.2	-46.17	-4,822.1	-704.4	346.6	217.9	128.64	2.694		
12,800.0	7,770.0	12,535.2	7,530.0	90.7	89.9	-46.17	-4,922.1	-704.4	346.6	215.4	131.16	2.642		
12,900.0	7,770.0	12,635.2	7,530.0	92.4	91.6	-46.17	-5,022.1	-704.4	346.6	212.9	133.67	2.593		
13,000.0	7,770.0	12,735.2	7,530.0	94.1	93.3	-46.17	-5,122.1	-704.4	346.6	210.4	136.18	2.545		
13,100.0	7,770.0	12,835.2	7,530.0	95.8	95.1	-46.17	-5,222.1	-704.4	346.6	207.9	138.70	2.499		
13,200.0	7,770.0	12,935.2	7,530.0	97.5	96.8	-46.17	-5,322.1	-704.4	346.6	205.3	141.22	2.454		
13,300.0	7,770.0	13,035.2	7,530.0	99.2	98.5	-46.17	-5,422.1	-704.4	346.6	202.8	143.74	2.411		
13,400.0	7,770.0	13,135.2	7,530.0	101.0	100.2	-46.17	-5,522.1	-704.4	346.6	200.3	146.26	2.370		
13,500.0	7,770.0	13,235.2	7,530.0	102.7	102.0	-46.17	-5,622.1	-704.4	346.6	197.8	148.78	2.329		
13,600.0	7,770.0	13,335.2	7,530.0	104.4	103.7	-46.17	-5,722.1	-704.4	346.6	195.3	151.30	2.291		
13,700.0	7,770.0	13,435.2	7,530.0	106.1	105.4	-46.17	-5,822.1	-704.4	346.6	192.7	153.82	2.253		
13,800.0	7,770.0	13,535.2	7,530.0	107.8	107.1	-46.17	-5,922.1	-704.4	346.6	190.2	156.34	2.217		
13,900.0	7,770.0	13,635.2	7,530.0	109.5	108.9	-46.17	-6,022.1	-704.4	346.6	187.7	158.86	2.182		
14,000.0	7,770.0	13,735.2	7,530.0	111.3	110.6	-46.17	-6,122.1	-704.4	346.6	185.2	161.39	2.147		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,100.0	7,770.0	13,835.2	7,530.0	113.0	112.3	-46.17	-6,222.1	-704.4	346.6	182.6	163.91	2.114	
14,200.0	7,770.0	13,935.2	7,530.0	114.7	114.1	-46.17	-6,322.1	-704.4	346.6	180.1	166.44	2.082	
14,300.0	7,770.0	14,035.2	7,530.0	116.4	115.8	-46.17	-6,422.1	-704.4	346.6	177.6	168.96	2.051	
14,400.0	7,770.0	14,135.2	7,530.0	118.2	117.5	-46.17	-6,522.1	-704.4	346.6	175.1	171.49	2.021	
14,500.0	7,770.0	14,235.2	7,530.0	119.9	119.3	-46.17	-6,622.1	-704.4	346.6	172.5	174.02	1.992	
14,600.0	7,770.0	14,335.2	7,530.0	121.6	121.0	-46.17	-6,722.1	-704.4	346.6	170.0	176.54	1.963	
14,700.0	7,770.0	14,435.2	7,530.0	123.3	122.7	-46.17	-6,822.1	-704.4	346.6	167.5	179.07	1.935	
14,800.0	7,770.0	14,535.2	7,530.0	125.1	124.5	-46.17	-6,922.1	-704.4	346.6	165.0	181.60	1.908	
14,900.0	7,770.0	14,635.2	7,530.0	126.8	126.2	-46.17	-7,022.1	-704.4	346.6	162.4	184.13	1.882	
15,000.0	7,770.0	14,735.2	7,530.0	128.5	127.9	-46.17	-7,122.1	-704.4	346.6	159.9	186.66	1.857	
15,100.0	7,770.0	14,835.2	7,530.0	130.2	129.7	-46.17	-7,222.1	-704.4	346.6	157.4	189.19	1.832	
15,200.0	7,770.0	14,935.2	7,530.0	132.0	131.4	-46.17	-7,322.1	-704.4	346.6	154.8	191.72	1.808	
15,300.0	7,770.0	15,035.2	7,530.0	133.7	133.1	-46.17	-7,422.1	-704.4	346.6	152.3	194.25	1.784	
15,400.0	7,770.0	15,135.2	7,530.0	135.4	134.9	-46.17	-7,522.1	-704.4	346.6	149.8	196.78	1.761	
15,500.0	7,770.0	15,235.2	7,530.0	137.2	136.6	-46.17	-7,622.1	-704.4	346.6	147.3	199.31	1.739	
15,600.0	7,770.0	15,335.2	7,530.0	138.9	138.4	-46.17	-7,722.1	-704.4	346.6	144.7	201.84	1.717	
15,700.0	7,770.0	15,435.2	7,530.0	140.6	140.1	-46.17	-7,822.1	-704.4	346.6	142.2	204.37	1.696	
15,800.0	7,770.0	15,535.2	7,530.0	142.4	141.8	-46.17	-7,922.1	-704.4	346.6	139.7	206.91	1.675	
15,900.0	7,770.0	15,635.2	7,530.0	144.1	143.6	-46.17	-8,022.1	-704.4	346.6	137.1	209.44	1.655	
16,000.0	7,770.0	15,735.2	7,530.0	145.8	145.3	-46.17	-8,122.1	-704.4	346.6	134.6	211.97	1.635	
16,100.0	7,770.0	15,835.2	7,530.0	147.6	147.1	-46.17	-8,222.1	-704.4	346.6	132.1	214.51	1.616	
16,200.0	7,770.0	15,935.2	7,530.0	149.3	148.8	-46.17	-8,322.1	-704.4	346.6	129.5	217.04	1.597	
16,300.0	7,770.0	16,035.2	7,530.0	151.0	150.5	-46.17	-8,422.1	-704.4	346.6	127.0	219.57	1.578	
16,400.0	7,770.0	16,135.2	7,530.0	152.8	152.3	-46.17	-8,522.1	-704.4	346.6	124.5	222.11	1.560	
16,500.0	7,770.0	16,235.2	7,530.0	154.5	154.0	-46.17	-8,622.1	-704.4	346.6	121.9	224.64	1.543	
16,600.0	7,770.0	16,335.2	7,530.0	156.3	155.8	-46.17	-8,722.1	-704.4	346.6	119.4	227.18	1.526	
16,700.0	7,770.0	16,435.2	7,530.0	158.0	157.5	-46.17	-8,822.1	-704.4	346.6	116.9	229.71	1.509	
16,800.0	7,770.0	16,535.2	7,530.0	159.7	159.3	-46.17	-8,922.1	-704.4	346.6	114.3	232.25	1.492 Level 3	
16,900.0	7,770.0	16,635.2	7,530.0	161.5	161.0	-46.17	-9,022.1	-704.4	346.6	111.8	234.78	1.476 Level 3	
17,000.0	7,770.0	16,735.2	7,530.0	163.2	162.7	-46.17	-9,122.1	-704.4	346.6	109.2	237.32	1.460 Level 3	
17,100.0	7,770.0	16,835.2	7,530.0	164.9	164.5	-46.17	-9,222.1	-704.4	346.6	106.7	239.85	1.445 Level 3	
17,200.0	7,770.0	16,935.2	7,530.0	166.7	166.2	-46.17	-9,322.1	-704.4	346.6	104.2	242.39	1.430 Level 3	
17,300.0	7,770.0	17,035.2	7,530.0	168.4	168.0	-46.17	-9,422.1	-704.4	346.6	101.6	244.92	1.415 Level 3	
17,400.0	7,770.0	17,135.2	7,530.0	170.2	169.7	-46.17	-9,522.1	-704.4	346.6	99.1	247.46	1.400 Level 3	
17,500.0	7,770.0	17,235.2	7,530.0	171.9	171.5	-46.17	-9,622.1	-704.4	346.6	96.6	250.00	1.386 Level 3	
17,600.0	7,770.0	17,335.2	7,530.0	173.6	173.2	-46.17	-9,722.1	-704.4	346.6	94.0	252.53	1.372 Level 3	
17,701.3	7,770.0	17,436.5	7,530.0	175.4	175.0	-46.17	-9,823.4	-704.4	346.6	91.5	255.10	1.359 Level 3, SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)				Between Ellipses (ft)	
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	20.1	20.1					
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	20.1	20.1	19.8	0.30	66.350		
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	20.1	20.1	19.5	0.65	30.869		
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	20.1	20.1	19.1	1.00	20.113		
350.0	350.0	350.0	350.0	0.6	0.6	90.00	0.0	20.1	20.1	19.0	1.18	17.129 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	158.38	0.0	20.1	20.4	19.0	1.35	15.066		
500.0	500.0	500.1	500.1	0.9	0.9	159.73	0.1	20.0	21.8	20.1	1.70	12.826		
600.0	599.9	600.4	600.4	1.0	1.0	160.20	1.2	18.6	23.7	21.6	2.05	11.537		
700.0	699.8	700.8	700.7	1.2	1.2	159.68	3.3	15.8	25.7	23.3	2.40	10.700		
800.0	799.5	801.1	800.9	1.4	1.4	158.39	6.5	11.6	28.0	25.2	2.76	10.138		
900.0	899.2	901.5	901.0	1.6	1.6	156.55	10.7	5.9	30.5	27.4	3.13	9.753		
1,000.0	998.6	1,001.7	1,000.9	1.9	1.8	154.43	15.9	-1.0	33.4	29.9	3.51	9.516		
1,100.0	1,097.9	1,101.6	1,100.4	2.1	2.0	153.49	21.3	-8.2	37.5	33.7	3.89	9.648		
1,185.5	1,182.5	1,187.0	1,185.4	2.4	2.2	153.69	25.9	-14.3	42.4	38.1	4.22	10.034		
1,200.0	1,196.9	1,201.5	1,199.8	2.4	2.2	153.79	26.7	-15.3	43.3	39.0	4.28	10.116		
1,300.0	1,295.8	1,301.3	1,299.2	2.7	2.5	154.35	32.1	-22.5	49.6	44.9	4.67	10.624		
1,400.0	1,394.8	1,401.1	1,398.6	3.0	2.7	154.78	37.5	-29.7	55.9	50.8	5.06	11.052		
1,500.0	1,493.7	1,500.9	1,498.0	3.3	2.9	155.13	42.9	-36.9	62.2	56.8	5.45	11.417		
1,600.0	1,592.6	1,600.7	1,597.4	3.6	3.1	155.41	48.3	-44.1	68.5	62.7	5.84	11.731		
1,700.0	1,691.6	1,700.5	1,696.8	3.9	3.4	155.65	53.7	-51.3	74.8	68.6	6.23	12.006		
1,800.0	1,790.5	1,800.3	1,796.2	4.2	3.6	155.85	59.1	-58.4	81.1	74.5	6.63	12.246		
1,900.0	1,889.5	1,900.1	1,895.6	4.5	3.8	156.02	64.5	-65.6	87.5	80.4	7.02	12.460		
2,000.0	1,988.4	1,999.9	1,995.0	4.8	4.1	156.17	69.9	-72.8	93.8	86.4	7.41	12.650		
2,100.0	2,087.3	2,099.7	2,094.4	5.1	4.3	156.29	75.3	-80.0	100.1	92.3	7.81	12.820		
2,200.0	2,186.3	2,199.5	2,193.8	5.4	4.5	156.41	80.7	-87.2	106.4	98.2	8.20	12.974		
2,300.0	2,285.2	2,299.3	2,293.2	5.7	4.8	156.51	86.1	-94.3	112.7	104.1	8.60	13.113		
2,400.0	2,384.2	2,399.1	2,392.6	6.0	5.0	156.60	91.5	-101.5	119.1	110.1	8.99	13.240		
2,500.0	2,483.1	2,498.9	2,491.9	6.3	5.2	156.68	96.9	-108.7	125.4	116.0	9.39	13.356		
2,600.0	2,582.0	2,598.7	2,591.3	6.6	5.4	156.75	102.3	-115.9	131.7	121.9	9.78	13.462		
2,700.0	2,681.0	2,698.5	2,690.7	6.9	5.7	156.82	107.7	-123.1	138.0	127.8	10.18	13.560		
2,800.0	2,779.9	2,798.3	2,790.1	7.2	5.9	156.88	113.2	-130.3	144.3	133.8	10.57	13.651		
2,900.0	2,878.8	2,898.1	2,889.5	7.5	6.1	156.94	118.6	-137.4	150.7	139.7	10.97	13.734		
3,000.0	2,977.8	2,997.9	2,988.9	7.8	6.4	156.99	124.0	-144.6	157.0	145.6	11.37	13.812		
3,100.0	3,076.7	3,097.7	3,088.3	8.1	6.6	157.03	129.4	-151.8	163.3	151.5	11.76	13.885		
3,200.0	3,175.7	3,197.5	3,187.7	8.4	6.8	157.08	134.8	-159.0	169.6	157.5	12.16	13.953		
3,300.0	3,274.6	3,297.3	3,287.1	8.7	7.1	157.12	140.2	-166.2	175.9	163.4	12.55	14.016		
3,400.0	3,373.5	3,397.1	3,386.5	9.1	7.3	157.15	145.6	-173.3	182.3	169.3	12.95	14.076		
3,500.0	3,472.5	3,496.9	3,485.9	9.4	7.5	157.19	151.0	-180.5	188.6	175.2	13.34	14.132		
3,600.0	3,571.4	3,596.7	3,585.3	9.7	7.8	157.22	156.4	-187.7	194.9	181.2	13.74	14.184		
3,700.0	3,670.4	3,696.5	3,684.7	10.0	8.0	157.25	161.8	-194.9	201.2	187.1	14.14	14.234		
3,800.0	3,769.3	3,796.3	3,784.1	10.3	8.2	157.28	167.2	-202.1	207.5	193.0	14.53	14.281		
3,900.0	3,868.2	3,896.1	3,883.5	10.6	8.5	157.31	172.6	-209.2	213.9	198.9	14.93	14.325		
4,000.0	3,967.2	3,995.9	3,982.9	10.9	8.7	157.34	178.0	-216.4	220.2	204.9	15.33	14.367		
4,100.0	4,066.1	4,095.7	4,082.3	11.2	8.9	157.36	183.4	-223.6	226.5	210.8	15.72	14.407		
4,200.0	4,165.1	4,195.5	4,181.7	11.5	9.2	157.38	188.8	-230.8	232.8	216.7	16.12	14.445		
4,300.0	4,264.0	4,295.3	4,281.0	11.8	9.4	157.40	194.2	-238.0	239.2	222.6	16.51	14.481		
4,400.0	4,362.9	4,395.1	4,380.4	12.1	9.6	157.42	199.6	-245.2	245.5	228.6	16.91	14.516		
4,500.0	4,461.9	4,494.9	4,479.8	12.4	9.9	157.44	205.0	-252.3	251.8	234.5	17.31	14.548		
4,600.0	4,560.8	4,594.7	4,579.2	12.8	10.1	157.46	210.4	-259.5	258.1	240.4	17.70	14.580		
4,700.0	4,659.7	4,694.5	4,678.6	13.1	10.3	157.48	215.8	-266.7	264.4	246.3	18.10	14.610		
4,800.0	4,758.7	4,794.3	4,778.0	13.4	10.6	157.50	221.2	-273.9	270.8	252.3	18.50	14.638		
4,900.0	4,857.6	4,894.1	4,877.4	13.7	10.8	157.51	226.6	-281.1	277.1	258.2	18.89	14.666		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)				Between Ellipses (ft)	
5,000.0	4,956.6	4,993.9	4,976.8	14.0	11.1	157.53	232.0	-288.2	283.4	264.1	19.29	14.692		
5,100.0	5,055.5	5,093.7	5,076.2	14.3	11.3	157.54	237.4	-295.4	289.7	270.0	19.69	14.717		
5,200.0	5,154.4	5,193.5	5,175.6	14.6	11.5	157.56	242.8	-302.6	296.0	276.0	20.08	14.741		
5,300.0	5,253.4	5,293.3	5,275.0	14.9	11.8	157.57	248.2	-309.8	302.4	281.9	20.48	14.764		
5,400.0	5,352.3	5,393.1	5,374.4	15.2	12.0	157.58	253.6	-317.0	308.7	287.8	20.88	14.787		
5,500.0	5,451.3	5,492.9	5,473.8	15.5	12.2	157.60	259.0	-324.1	315.0	293.7	21.27	14.808		
5,600.0	5,550.2	5,592.7	5,573.2	15.8	12.5	157.61	264.4	-331.3	321.3	299.7	21.67	14.829		
5,700.0	5,649.1	5,692.5	5,672.6	16.1	12.7	157.62	269.8	-338.5	327.7	305.6	22.07	14.849		
5,800.0	5,748.1	5,792.3	5,772.0	16.5	12.9	157.63	275.2	-345.7	334.0	311.5	22.46	14.868		
5,900.0	5,847.0	5,892.1	5,871.4	16.8	13.2	157.64	280.6	-352.9	340.3	317.4	22.86	14.887		
6,000.0	5,945.9	5,991.9	5,970.8	17.1	13.4	157.65	286.0	-360.1	346.6	323.4	23.26	14.905		
6,100.0	6,044.9	6,091.7	6,070.2	17.4	13.6	157.66	291.4	-367.2	352.9	329.3	23.65	14.922		
6,200.0	6,143.8	6,191.5	6,169.5	17.7	13.9	157.67	296.8	-374.4	359.3	335.2	24.05	14.939		
6,300.0	6,242.8	6,291.3	6,268.9	18.0	14.1	157.68	302.3	-381.6	365.6	341.1	24.45	14.955		
6,400.0	6,341.7	6,391.1	6,368.3	18.3	14.3	157.69	307.7	-388.8	371.9	347.1	24.84	14.971		
6,500.0	6,440.6	6,490.9	6,467.7	18.6	14.6	157.70	313.1	-396.0	378.2	353.0	25.24	14.986		
6,600.0	6,539.6	6,590.7	6,567.1	18.9	14.8	157.71	318.5	-403.1	384.5	358.9	25.64	15.001		
6,700.0	6,638.5	6,690.5	6,666.5	19.2	15.0	157.71	323.9	-410.3	390.9	364.8	26.03	15.015		
6,800.0	6,737.5	6,790.3	6,765.9	19.6	15.3	157.72	329.3	-417.5	397.2	370.8	26.43	15.029		
6,900.0	6,836.4	6,890.1	6,865.3	19.9	15.5	157.73	334.7	-424.7	403.5	376.7	26.83	15.042		
7,000.0	6,935.3	6,989.9	6,964.7	20.2	15.7	157.74	340.1	-431.9	409.8	382.6	27.22	15.055		
7,087.6	7,022.0	7,077.3	7,051.8	20.4	15.9	157.86	343.9	-438.2	415.4	387.8	27.53	15.087		
7,100.0	7,034.3	7,089.7	7,064.2	20.5	15.9	164.55	343.9	-439.1	416.2	388.6	27.54	15.108		
7,150.0	7,083.8	7,139.5	7,113.8	20.6	16.0	-166.14	341.6	-442.6	419.3	391.8	27.55	15.218		
7,200.0	7,133.2	7,189.1	7,162.9	20.7	16.1	-142.20	335.8	-446.1	422.5	395.0	27.52	15.352		
7,250.0	7,182.3	7,238.5	7,211.3	20.8	16.1	-127.05	326.7	-449.6	425.7	398.3	27.46	15.506		
7,300.0	7,230.8	7,287.8	7,258.9	20.9	16.1	-117.65	314.3	-453.0	428.9	401.6	27.36	15.675		
7,350.0	7,278.4	7,336.9	7,305.4	21.0	16.1	-111.45	298.7	-456.3	432.1	404.8	27.25	15.853		
7,400.0	7,325.0	7,385.9	7,350.5	21.0	16.1	-107.08	280.0	-459.5	435.2	408.0	27.14	16.035		
7,450.0	7,370.3	7,434.8	7,394.2	21.1	16.1	-103.83	258.3	-462.5	438.2	411.2	27.03	16.213		
7,500.0	7,414.0	7,483.5	7,436.2	21.1	16.1	-101.31	233.8	-465.5	441.2	414.3	26.93	16.382		
7,550.0	7,456.1	7,532.1	7,476.3	21.2	16.0	-99.30	206.5	-468.3	444.1	417.2	26.86	16.533		
7,600.0	7,496.2	7,580.6	7,514.4	21.2	16.0	-97.64	176.7	-470.9	446.8	420.0	26.82	16.659		
7,650.0	7,534.2	7,628.9	7,550.3	21.2	16.0	-96.26	144.4	-473.4	449.4	422.6	26.82	16.755		
7,700.0	7,569.9	7,677.2	7,583.9	21.3	16.0	-95.09	109.8	-475.7	451.9	425.1	26.88	16.815		
7,750.0	7,603.1	7,725.4	7,615.0	21.4	16.1	-94.10	73.1	-477.8	454.3	427.3	26.99	16.832		
7,800.0	7,633.7	7,773.5	7,643.6	21.4	16.1	-93.25	34.4	-479.7	456.4	429.3	27.17	16.800		
7,850.0	7,661.5	7,821.6	7,669.5	21.5	16.2	-92.53	-6.0	-481.4	458.4	431.0	27.40	16.733		
7,900.0	7,686.3	7,869.5	7,692.5	21.6	16.4	-91.91	-48.0	-483.0	460.2	432.5	27.71	16.611		
7,950.0	7,708.1	7,917.5	7,712.7	21.8	16.5	-91.40	-91.5	-484.3	461.9	433.8	28.09	16.443		
8,000.0	7,726.8	7,965.3	7,730.0	22.0	16.7	-90.97	-136.1	-485.4	463.3	434.7	28.54	16.233		
8,050.0	7,742.1	8,013.2	7,744.2	22.2	16.9	-90.62	-181.8	-486.2	464.5	435.4	29.06	15.984		
8,100.0	7,754.2	8,061.0	7,755.4	22.4	17.2	-90.36	-228.2	-486.9	465.4	435.8	29.64	15.700		
8,150.0	7,762.9	8,108.8	7,763.4	22.6	17.5	-90.16	-275.3	-487.3	466.2	435.9	30.29	15.388		
8,200.0	7,768.2	8,156.5	7,768.3	22.9	17.8	-90.05	-322.8	-487.5	466.7	435.7	31.00	15.054		
8,251.3	7,770.0	8,205.6	7,770.0	23.2	18.2	-90.00	-371.8	-487.4	467.0	435.2	31.79	14.693		
8,300.0	7,770.0	8,254.2	7,770.0	23.5	18.6	-90.00	-420.5	-487.2	467.2	434.4	32.72	14.276		
8,400.0	7,770.0	8,354.2	7,770.0	24.2	19.5	-90.00	-520.5	-486.9	467.5	432.7	34.81	13.431		
8,500.0	7,770.0	8,454.2	7,770.0	25.1	20.6	-90.00	-620.5	-486.5	467.9	430.8	37.11	12.609		
8,600.0	7,770.0	8,554.2	7,770.0	26.0	21.7	-90.00	-720.5	-486.2	468.2	428.6	39.58	11.829		
8,700.0	7,770.0	8,654.2	7,770.0	27.0	22.9	-90.00	-820.5	-485.8	468.6	426.4	42.21	11.102		
8,800.0	7,770.0	8,754.2	7,770.0	28.1	24.1	-90.00	-920.5	-485.5	468.9	424.0	44.95	10.432		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,900.0	7,770.0	8,854.2	7,770.0	29.2	25.5	-90.00	-1,020.5	-485.1	469.3	421.5	47.79	9.819	
9,000.0	7,770.0	8,954.2	7,770.0	30.5	26.8	-90.00	-1,120.5	-484.8	469.6	418.9	50.72	9.259	
9,100.0	7,770.0	9,054.2	7,770.0	31.7	28.3	-90.00	-1,220.5	-484.5	470.0	416.2	53.72	8.749	
9,200.0	7,770.0	9,154.2	7,770.0	33.0	29.7	-90.00	-1,320.5	-484.1	470.3	413.5	56.77	8.284	
9,300.0	7,770.0	9,254.2	7,770.0	34.4	31.2	-90.00	-1,420.5	-483.8	470.7	410.8	59.88	7.860	
9,400.0	7,770.0	9,354.2	7,770.0	35.7	32.7	-90.00	-1,520.4	-483.4	471.0	408.0	63.03	7.473	
9,500.0	7,770.0	9,454.2	7,770.0	37.1	34.2	-90.00	-1,620.4	-483.1	471.4	405.2	66.21	7.119	
9,600.0	7,770.0	9,554.2	7,770.0	38.6	35.8	-90.00	-1,720.4	-482.7	471.7	402.3	69.43	6.794	
9,700.0	7,770.0	9,654.2	7,770.0	40.0	37.4	-90.00	-1,820.4	-482.4	472.1	399.4	72.67	6.496	
9,800.0	7,770.0	9,754.2	7,770.0	41.5	39.0	-90.00	-1,920.4	-482.0	472.4	396.5	75.93	6.221	
9,900.0	7,770.0	9,854.2	7,770.0	43.0	40.6	-90.00	-2,020.4	-481.7	472.8	393.5	79.22	5.968	
10,000.0	7,770.0	9,954.2	7,770.0	44.6	42.2	-90.00	-2,120.4	-481.3	473.1	390.6	82.53	5.733	
10,100.0	7,770.0	10,054.2	7,770.0	46.1	43.8	-90.00	-2,220.4	-481.0	473.5	387.6	85.85	5.515	
10,200.0	7,770.0	10,154.2	7,770.0	47.7	45.4	-90.00	-2,320.4	-480.6	473.8	384.6	89.18	5.313	
10,300.0	7,770.0	10,254.2	7,770.0	49.2	47.1	-90.00	-2,420.4	-480.3	474.2	381.6	92.53	5.124	
10,400.0	7,770.0	10,354.2	7,770.0	50.8	48.7	-90.00	-2,520.4	-479.9	474.5	378.6	95.89	4.948	
10,500.0	7,770.0	10,454.2	7,770.0	52.4	50.4	-90.00	-2,620.4	-479.6	474.9	375.6	99.26	4.784	
10,600.0	7,770.0	10,554.2	7,770.0	54.0	52.0	-90.00	-2,720.4	-479.2	475.2	372.6	102.64	4.630	
10,700.0	7,770.0	10,654.2	7,770.0	55.6	53.7	-90.00	-2,820.4	-478.9	475.6	369.5	106.03	4.485	
10,800.0	7,770.0	10,754.2	7,770.0	57.2	55.4	-90.00	-2,920.4	-478.5	475.9	366.5	109.42	4.349	
10,900.0	7,770.0	10,854.2	7,770.0	58.9	57.1	-90.00	-3,020.4	-478.2	476.3	363.4	112.82	4.221	
11,000.0	7,770.0	10,954.2	7,770.0	60.5	58.8	-90.00	-3,120.4	-477.8	476.6	360.4	116.23	4.100	
11,100.0	7,770.0	11,054.2	7,770.0	62.2	60.4	-90.00	-3,220.4	-477.5	476.9	357.3	119.65	3.986	
11,200.0	7,770.0	11,154.2	7,770.0	63.8	62.1	-90.00	-3,320.4	-477.1	477.3	354.2	123.07	3.878	
11,300.0	7,770.0	11,254.2	7,770.0	65.5	63.8	-90.00	-3,420.4	-476.8	477.6	351.2	126.49	3.776	
11,400.0	7,770.0	11,354.2	7,770.0	67.1	65.5	-90.00	-3,520.4	-476.4	478.0	348.1	129.92	3.679	
11,500.0	7,770.0	11,454.2	7,770.0	68.8	67.2	-90.00	-3,620.4	-476.1	478.3	345.0	133.35	3.587	
11,600.0	7,770.0	11,554.2	7,770.0	70.4	68.9	-90.00	-3,720.4	-475.7	478.7	341.9	136.79	3.500	
11,700.0	7,770.0	11,654.2	7,770.0	72.1	70.6	-90.00	-3,820.4	-475.4	479.0	338.8	140.23	3.416	
11,800.0	7,770.0	11,754.2	7,770.0	73.8	72.3	-90.00	-3,920.4	-475.0	479.4	335.7	143.67	3.337	
11,900.0	7,770.0	11,854.2	7,770.0	75.5	74.1	-90.00	-4,020.4	-474.7	479.7	332.6	147.12	3.261	
12,000.0	7,770.0	11,954.2	7,770.0	77.1	75.8	-90.00	-4,120.4	-474.3	480.1	329.5	150.57	3.189	
12,100.0	7,770.0	12,054.2	7,770.0	78.8	77.5	-90.00	-4,220.4	-474.0	480.4	326.4	154.02	3.119	
12,200.0	7,770.0	12,154.2	7,770.0	80.5	79.2	-90.00	-4,320.4	-473.6	480.8	323.3	157.48	3.053	
12,300.0	7,770.0	12,254.2	7,770.0	82.2	80.9	-90.00	-4,420.4	-473.3	481.1	320.2	160.93	2.990	
12,400.0	7,770.0	12,354.2	7,770.0	83.9	82.6	-90.00	-4,520.4	-472.9	481.5	317.1	164.39	2.929	
12,500.0	7,770.0	12,454.2	7,770.0	85.6	84.4	-90.00	-4,620.4	-472.6	481.8	314.0	167.85	2.871	
12,600.0	7,770.0	12,554.2	7,770.0	87.3	86.1	-90.00	-4,720.4	-472.2	482.2	310.9	171.32	2.815	
12,700.0	7,770.0	12,654.2	7,770.0	89.0	87.8	-90.00	-4,820.4	-471.9	482.5	307.8	174.78	2.761	
12,800.0	7,770.0	12,754.2	7,770.0	90.7	89.5	-90.00	-4,920.4	-471.5	482.9	304.6	178.25	2.709	
12,900.0	7,770.0	12,854.2	7,770.0	92.4	91.2	-90.00	-5,020.4	-471.2	483.2	301.5	181.71	2.659	
13,000.0	7,770.0	12,954.2	7,770.0	94.1	93.0	-90.00	-5,120.4	-470.8	483.6	298.4	185.18	2.611	
13,100.0	7,770.0	13,054.2	7,770.0	95.8	94.7	-90.00	-5,220.4	-470.5	483.9	295.3	188.65	2.565	
13,200.0	7,770.0	13,154.2	7,770.0	97.5	96.4	-90.00	-5,320.4	-470.1	484.3	292.2	192.13	2.521	
13,300.0	7,770.0	13,254.2	7,770.0	99.2	98.2	-90.00	-5,420.4	-469.8	484.6	289.0	195.60	2.478	
13,400.0	7,770.0	13,354.2	7,770.0	101.0	99.9	-90.00	-5,520.4	-469.4	485.0	285.9	199.08	2.436	
13,500.0	7,770.0	13,454.2	7,770.0	102.7	101.6	-90.00	-5,620.4	-469.1	485.3	282.8	202.55	2.396	
13,600.0	7,770.0	13,554.2	7,770.0	104.4	103.4	-90.00	-5,720.4	-468.7	485.7	279.6	206.03	2.357	
13,700.0	7,770.0	13,654.2	7,770.0	106.1	105.1	-90.00	-5,820.4	-468.4	486.0	276.5	209.51	2.320	
13,800.0	7,770.0	13,754.2	7,770.0	107.8	106.8	-90.00	-5,920.4	-468.0	486.4	273.4	212.99	2.284	
13,900.0	7,770.0	13,854.2	7,770.0	109.5	108.6	-90.00	-6,020.4	-467.7	486.7	270.3	216.47	2.249	
14,000.0	7,770.0	13,954.2	7,770.0	111.3	110.3	-90.00	-6,120.4	-467.3	487.1	267.1	219.95	2.215	

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		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)					
14,100.0	7,770.0	14,054.2	7,770.0	113.0	112.0	-90.00	-6,220.4	-467.0	487.4	264.0	2.182		
14,200.0	7,770.0	14,154.2	7,770.0	114.7	113.8	-90.00	-6,320.4	-466.6	487.8	260.9	2.150		
14,300.0	7,770.0	14,254.2	7,770.0	116.4	115.5	-90.00	-6,420.4	-466.3	488.1	257.7	2.119		
14,400.0	7,770.0	14,354.2	7,770.0	118.2	117.2	-90.00	-6,520.4	-465.9	488.5	254.6	2.089		
14,500.0	7,770.0	14,454.2	7,770.0	119.9	119.0	-90.00	-6,620.4	-465.6	488.8	251.5	2.059		
14,600.0	7,770.0	14,554.2	7,770.0	121.6	120.7	-90.00	-6,720.4	-465.2	489.2	248.3	2.031		
14,700.0	7,770.0	14,654.2	7,770.0	123.3	122.4	-90.00	-6,820.4	-464.9	489.5	245.2	2.003		
14,800.0	7,770.0	14,754.2	7,770.0	125.1	124.2	-90.00	-6,920.4	-464.6	489.9	242.0	1.977		
14,900.0	7,770.0	14,854.2	7,770.0	126.8	125.9	-90.00	-7,020.4	-464.2	490.2	238.9	1.951		
15,000.0	7,770.0	14,954.2	7,770.0	128.5	127.7	-90.00	-7,120.4	-463.9	490.6	235.8	1.925		
15,100.0	7,770.0	15,054.2	7,770.0	130.2	129.4	-90.00	-7,220.4	-463.5	490.9	232.6	1.901		
15,200.0	7,770.0	15,154.2	7,770.0	132.0	131.1	-90.00	-7,320.4	-463.2	491.3	229.5	1.877		
15,300.0	7,770.0	15,254.2	7,770.0	133.7	132.9	-90.00	-7,420.4	-462.8	491.6	226.4	1.853		
15,400.0	7,770.0	15,354.2	7,770.0	135.4	134.6	-90.00	-7,520.4	-462.5	492.0	223.2	1.831		
15,500.0	7,770.0	15,454.2	7,770.0	137.2	136.4	-90.00	-7,620.4	-462.1	492.3	220.1	1.808		
15,600.0	7,770.0	15,554.2	7,770.0	138.9	138.1	-90.00	-7,720.4	-461.8	492.7	216.9	1.787		
15,700.0	7,770.0	15,654.2	7,770.0	140.6	139.9	-90.00	-7,820.4	-461.4	493.0	213.8	1.766		
15,800.0	7,770.0	15,754.2	7,770.0	142.4	141.6	-90.00	-7,920.4	-461.1	493.4	210.6	1.745		
15,900.0	7,770.0	15,854.2	7,770.0	144.1	143.3	-90.00	-8,020.4	-460.7	493.7	207.5	1.725		
16,000.0	7,770.0	15,954.2	7,770.0	145.8	145.1	-90.00	-8,120.4	-460.4	494.1	204.4	1.705		
16,100.0	7,770.0	16,054.2	7,770.0	147.6	146.8	-90.00	-8,220.4	-460.0	494.4	201.2	1.686		
16,200.0	7,770.0	16,154.2	7,770.0	149.3	148.6	-90.00	-8,320.4	-459.7	494.8	198.1	1.668		
16,300.0	7,770.0	16,254.2	7,770.0	151.0	150.3	-90.00	-8,420.4	-459.3	495.1	194.9	1.649		
16,400.0	7,770.0	16,354.2	7,770.0	152.8	152.1	-90.00	-8,520.4	-459.0	495.5	191.8	1.632		
16,500.0	7,770.0	16,454.1	7,770.0	154.5	153.8	-90.00	-8,620.4	-458.6	495.8	188.6	1.614		
16,600.0	7,770.0	16,554.1	7,770.0	156.3	155.5	-90.00	-8,720.4	-458.3	496.2	185.5	1.597		
16,700.0	7,770.0	16,654.1	7,770.0	158.0	157.3	-90.00	-8,820.4	-457.9	496.5	182.3	1.580		
16,800.0	7,770.0	16,754.1	7,770.0	159.7	159.0	-90.00	-8,920.4	-457.6	496.9	179.2	1.564		
16,900.0	7,770.0	16,854.1	7,770.0	161.5	160.8	-90.00	-9,020.4	-457.2	497.2	176.1	1.548		
17,000.0	7,770.0	16,954.1	7,770.0	163.2	162.5	-90.00	-9,120.4	-456.9	497.5	172.9	1.533		
17,100.0	7,770.0	17,054.1	7,770.0	164.9	164.3	-90.00	-9,220.4	-456.5	497.9	169.8	1.517		
17,200.0	7,770.0	17,154.1	7,770.0	166.7	166.0	-90.00	-9,320.4	-456.2	498.2	166.6	1.502		
17,300.0	7,770.0	17,254.1	7,770.0	168.4	167.8	-90.00	-9,420.4	-455.8	498.6	163.5	1.488 Level 3		
17,400.0	7,770.0	17,354.1	7,770.0	170.2	169.5	-90.00	-9,520.4	-455.5	498.9	160.3	1.473 Level 3		
17,500.0	7,770.0	17,454.1	7,770.0	171.9	171.2	-90.00	-9,620.4	-455.1	499.3	157.2	1.459 Level 3		
17,600.0	7,770.0	17,554.1	7,770.0	173.6	173.0	-90.00	-9,720.3	-454.8	499.6	154.0	1.446 Level 3		
17,701.3	7,770.0	17,655.5	7,770.0	175.4	174.8	-90.00	-9,821.7	-454.4	500.0	150.8	1.432 Level 3, SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	30.2	30.2					
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	30.2	30.2	29.9	0.30	99.526		
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	30.2	30.2	29.6	0.65	46.303		
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	30.2	30.2	29.2	1.00	30.170		
350.0	350.0	350.0	350.0	0.6	0.6	90.00	0.0	30.2	30.2	29.0	1.18	25.694 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	158.31	0.0	30.2	30.4	29.1	1.35	22.524		
500.0	500.0	500.0	500.0	0.9	0.8	159.46	0.0	30.2	32.1	30.4	1.70	18.858		
600.0	599.9	600.2	600.2	1.0	1.0	160.15	0.8	29.9	35.0	32.9	2.05	17.059		
700.0	699.8	700.4	700.3	1.2	1.2	159.25	3.2	28.9	38.8	36.4	2.40	16.143		
800.0	799.5	800.5	800.4	1.4	1.4	157.23	7.3	27.1	43.6	40.8	2.76	15.765		
900.0	899.2	900.5	900.2	1.6	1.6	154.80	12.7	24.8	49.4	46.3	3.13	15.777		
1,000.0	998.6	1,000.2	999.7	1.9	1.8	153.48	18.2	22.5	56.9	53.3	3.51	16.201		
1,100.0	1,097.9	1,099.8	1,099.1	2.1	2.0	153.16	23.8	20.1	65.9	62.0	3.89	16.924		
1,185.5	1,182.5	1,184.8	1,184.0	2.4	2.1	153.42	28.6	18.1	74.8	70.6	4.22	17.720		
1,200.0	1,196.9	1,199.2	1,198.4	2.4	2.2	153.50	29.4	17.7	76.4	72.1	4.28	17.864		
1,300.0	1,295.8	1,298.6	1,297.6	2.7	2.4	153.97	34.9	15.4	87.5	82.8	4.67	18.754		
1,400.0	1,394.8	1,398.0	1,396.8	3.0	2.6	154.33	40.5	13.0	98.6	93.6	5.06	19.502		
1,500.0	1,493.7	1,497.4	1,496.0	3.3	2.8	154.63	46.1	10.7	109.7	104.3	5.45	20.139		
1,600.0	1,592.6	1,596.7	1,595.1	3.6	2.9	154.86	51.6	8.3	120.8	115.0	5.84	20.686		
1,700.0	1,691.6	1,696.1	1,694.3	3.9	3.1	155.06	57.2	5.9	132.0	125.7	6.24	21.163		
1,800.0	1,790.5	1,795.5	1,793.5	4.2	3.3	155.23	62.8	3.6	143.1	136.5	6.63	21.581		
1,900.0	1,889.5	1,894.9	1,892.7	4.5	3.5	155.37	68.3	1.2	154.2	147.2	7.03	21.950		
2,000.0	1,988.4	1,994.3	1,991.9	4.8	3.7	155.49	73.9	-1.2	165.3	157.9	7.42	22.279		
2,100.0	2,087.3	2,093.6	2,091.1	5.1	4.0	155.60	79.4	-3.5	176.5	168.6	7.82	22.574		
2,200.0	2,186.3	2,193.0	2,190.3	5.4	4.2	155.70	85.0	-5.9	187.6	179.4	8.21	22.839		
2,300.0	2,285.2	2,292.4	2,289.5	5.7	4.4	155.78	90.6	-8.2	198.7	190.1	8.61	23.079		
2,400.0	2,384.2	2,391.8	2,388.7	6.0	4.6	155.86	96.1	-10.6	209.8	200.8	9.01	23.298		
2,500.0	2,483.1	2,491.2	2,487.9	6.3	4.8	155.93	101.7	-13.0	221.0	211.6	9.40	23.497		
2,600.0	2,582.0	2,590.5	2,587.1	6.6	5.0	155.99	107.3	-15.3	232.1	222.3	9.80	23.680		
2,700.0	2,681.0	2,689.9	2,686.3	6.9	5.2	156.04	112.8	-17.7	243.2	233.0	10.20	23.849		
2,800.0	2,779.9	2,789.3	2,785.5	7.2	5.4	156.09	118.4	-20.1	254.3	243.7	10.60	24.004		
2,900.0	2,878.8	2,888.7	2,884.7	7.5	5.6	156.14	124.0	-22.4	265.5	254.5	10.99	24.148		
3,000.0	2,977.8	2,988.1	2,983.9	7.8	5.8	156.18	129.5	-24.8	276.6	265.2	11.39	24.282		
3,100.0	3,076.7	3,087.4	3,083.1	8.1	6.0	156.22	135.1	-27.1	287.7	275.9	11.79	24.406		
3,200.0	3,175.7	3,186.8	3,182.3	8.4	6.2	156.26	140.6	-29.5	298.8	286.7	12.19	24.522		
3,300.0	3,274.6	3,286.2	3,281.5	8.7	6.4	156.29	146.2	-31.9	310.0	297.4	12.58	24.631		
3,400.0	3,373.5	3,385.6	3,380.7	9.1	6.6	156.33	151.8	-34.2	321.1	308.1	12.98	24.733		
3,500.0	3,472.5	3,484.9	3,479.8	9.4	6.8	156.36	157.3	-36.6	332.2	318.8	13.38	24.829		
3,600.0	3,571.4	3,584.3	3,579.0	9.7	7.0	156.38	162.9	-39.0	343.4	329.6	13.78	24.919		
3,700.0	3,670.4	3,683.7	3,678.2	10.0	7.2	156.41	168.5	-41.3	354.5	340.3	14.18	25.004		
3,800.0	3,769.3	3,783.1	3,777.4	10.3	7.4	156.43	174.0	-43.7	365.6	351.0	14.58	25.084		
3,900.0	3,868.2	3,882.5	3,876.6	10.6	7.6	156.46	179.6	-46.0	376.7	361.8	14.97	25.160		
4,000.0	3,967.2	3,981.8	3,975.8	10.9	7.8	156.48	185.1	-48.4	387.9	372.5	15.37	25.231		
4,100.0	4,066.1	4,081.2	4,075.0	11.2	8.0	156.50	190.7	-50.8	399.0	383.2	15.77	25.300		
4,200.0	4,165.1	4,180.6	4,174.2	11.5	8.2	156.52	196.3	-53.1	410.1	393.9	16.17	25.364		
4,300.0	4,264.0	4,280.0	4,273.4	11.8	8.4	156.54	201.8	-55.5	421.2	404.7	16.57	25.426		
4,400.0	4,362.9	4,379.4	4,372.6	12.1	8.6	156.55	207.4	-57.9	432.4	415.4	16.97	25.484		
4,500.0	4,461.9	4,478.7	4,471.8	12.4	8.8	156.57	213.0	-60.2	443.5	426.1	17.36	25.540		
4,600.0	4,560.8	4,578.1	4,571.0	12.8	9.0	156.59	218.5	-62.6	454.6	436.9	17.76	25.594		
4,700.0	4,659.7	4,677.5	4,670.2	13.1	9.2	156.60	224.1	-64.9	465.8	447.6	18.16	25.645		
4,800.0	4,758.7	4,776.9	4,769.4	13.4	9.4	156.61	229.6	-67.3	476.9	458.3	18.56	25.693		
4,900.0	4,857.6	4,876.2	4,868.6	13.7	9.6	156.63	235.2	-69.7	488.0	469.1	18.96	25.740		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,000.0	4,956.6	4,975.6	4,967.8	14.0	9.8	156.64	240.8	-72.0	499.1	479.8	19.36	25.785		
5,100.0	5,055.5	5,075.0	5,067.0	14.3	10.0	156.65	246.3	-74.4	510.3	490.5	19.76	25.828		
5,200.0	5,154.4	5,174.4	5,166.2	14.6	10.2	156.66	251.9	-76.8	521.4	501.2	20.16	25.869		
5,300.0	5,253.4	5,273.8	5,265.4	14.9	10.4	156.68	257.5	-79.1	532.5	512.0	20.55	25.908		
5,400.0	5,352.3	5,373.1	5,364.6	15.2	10.6	156.69	263.0	-81.5	543.7	522.7	20.95	25.946		
5,500.0	5,451.3	5,472.5	5,463.7	15.5	10.8	156.70	268.6	-83.8	554.8	533.4	21.35	25.983		
5,600.0	5,550.2	5,571.9	5,562.9	15.8	11.0	156.71	274.1	-86.2	565.9	544.2	21.75	26.018		
5,700.0	5,649.1	5,671.3	5,662.1	16.1	11.2	156.72	279.7	-88.6	577.0	554.9	22.15	26.052		
5,800.0	5,748.1	5,770.7	5,761.3	16.5	11.4	156.73	285.3	-90.9	588.2	565.6	22.55	26.085		
5,900.0	5,847.0	5,870.0	5,860.5	16.8	11.6	156.74	290.8	-93.3	599.3	576.3	22.95	26.116		
6,000.0	5,945.9	5,969.4	5,959.7	17.1	11.8	156.74	296.4	-95.7	610.4	587.1	23.35	26.147		
6,100.0	6,044.9	6,068.8	6,058.9	17.4	12.0	156.75	302.0	-98.0	621.5	597.8	23.74	26.176		
6,200.0	6,143.8	6,168.2	6,158.1	17.7	12.2	156.76	307.5	-100.4	632.7	608.5	24.14	26.205		
6,300.0	6,242.8	6,267.6	6,257.3	18.0	12.5	156.77	313.1	-102.7	643.8	619.3	24.54	26.232		
6,400.0	6,341.7	6,366.9	6,356.5	18.3	12.7	156.78	318.6	-105.1	654.9	630.0	24.94	26.259		
6,500.0	6,440.6	6,466.3	6,455.7	18.6	12.9	156.78	324.2	-107.5	666.1	640.7	25.34	26.285		
6,600.0	6,539.6	6,565.7	6,554.9	18.9	13.1	156.79	329.8	-109.8	677.2	651.4	25.74	26.310		
6,700.0	6,638.5	6,665.1	6,654.1	19.2	13.3	156.80	335.3	-112.2	688.3	662.2	26.14	26.334		
6,800.0	6,737.5	6,764.4	6,753.3	19.6	13.5	156.80	340.9	-114.6	699.4	672.9	26.54	26.357		
6,900.0	6,836.4	6,865.7	6,854.5	19.9	13.6	157.18	342.0	-117.0	710.5	683.6	26.83	26.477		
7,000.0	6,935.3	6,964.5	6,952.4	20.2	13.7	158.60	329.7	-119.5	721.4	694.5	26.88	26.840		
7,087.6	7,022.0	7,045.8	7,031.1	20.4	13.6	160.52	309.5	-121.5	731.7	704.9	26.77	27.333		
7,100.0	7,034.3	7,056.9	7,041.6	20.5	13.6	167.49	306.1	-121.8	733.3	706.5	26.73	27.431		
7,150.0	7,083.8	7,100.0	7,082.0	20.6	13.6	-162.11	291.2	-122.9	739.8	713.2	26.57	27.845		
7,200.0	7,133.2	7,144.2	7,122.4	20.7	13.5	-137.06	273.4	-124.0	746.6	720.2	26.40	28.280		
7,250.0	7,182.3	7,186.6	7,160.2	20.8	13.5	-120.87	254.0	-125.0	753.7	727.4	26.25	28.709		
7,300.0	7,230.8	7,228.4	7,196.1	20.9	13.5	-110.47	232.7	-126.0	760.9	734.8	26.13	29.121		
7,350.0	7,278.4	7,269.6	7,230.3	21.0	13.4	-103.32	209.8	-127.0	768.2	742.2	26.04	29.504		
7,400.0	7,325.0	7,310.3	7,262.7	21.0	13.4	-98.05	185.2	-128.0	775.6	749.6	25.98	29.850		
7,450.0	7,370.3	7,350.0	7,292.9	21.1	13.3	-93.96	159.5	-128.9	782.9	756.9	25.96	30.152		
7,500.0	7,414.0	7,390.0	7,321.9	21.1	13.3	-90.63	131.9	-129.8	790.1	764.1	25.99	30.399		
7,550.0	7,456.1	7,429.3	7,348.8	21.2	13.3	-87.87	103.3	-130.6	797.1	771.0	26.05	30.594		
7,600.0	7,496.2	7,468.2	7,373.8	21.2	13.4	-85.51	73.6	-131.4	803.9	777.7	26.15	30.737		
7,650.0	7,534.2	7,506.7	7,397.0	21.2	13.4	-83.49	42.8	-132.2	810.4	784.1	26.29	30.826		
7,700.0	7,569.9	7,550.0	7,421.1	21.3	13.5	-81.67	6.8	-133.1	816.5	790.1	26.46	30.859		
7,750.0	7,603.1	7,583.0	7,437.9	21.4	13.5	-80.20	-21.5	-133.7	822.3	795.6	26.64	30.860		
7,800.0	7,633.7	7,620.7	7,455.5	21.4	13.7	-78.87	-54.9	-134.3	827.6	800.7	26.87	30.796		
7,850.0	7,661.5	7,658.2	7,471.3	21.5	13.8	-77.72	-88.9	-134.9	832.4	805.3	27.13	30.687		
7,900.0	7,686.3	7,700.0	7,486.7	21.6	14.0	-76.69	-127.7	-135.6	836.8	809.3	27.43	30.508		
7,950.0	7,708.1	7,732.8	7,497.2	21.8	14.1	-75.88	-158.8	-136.1	840.5	812.8	27.72	30.321		
8,000.0	7,726.8	7,769.8	7,507.4	22.0	14.4	-75.18	-194.4	-136.5	843.8	815.7	28.06	30.067		
8,050.0	7,742.1	7,806.8	7,515.7	22.2	14.6	-74.62	-230.4	-137.0	846.4	817.9	28.43	29.769		
8,100.0	7,754.2	7,850.0	7,523.0	22.4	14.9	-74.15	-273.0	-137.5	848.4	819.5	28.88	29.378		
8,150.0	7,762.9	7,880.4	7,526.6	22.6	15.2	-73.87	-303.2	-137.8	849.8	820.5	29.27	29.028		
8,200.0	7,768.2	7,917.2	7,529.2	22.9	15.5	-73.68	-339.8	-138.1	850.5	820.8	29.74	28.594		
8,251.3	7,770.0	7,956.5	7,530.0	23.2	15.8	-73.61	-379.1	-138.4	850.6	820.3	30.28	28.093		
8,300.0	7,770.0	8,005.2	7,530.0	23.5	16.3	-73.60	-427.8	-138.7	850.3	819.1	31.19	27.264		
8,400.0	7,770.0	8,105.2	7,530.0	24.2	17.3	-73.59	-527.8	-139.4	849.6	816.4	33.23	25.569		
8,500.0	7,770.0	8,205.2	7,530.0	25.1	18.5	-73.58	-627.8	-140.1	848.9	813.5	35.47	23.933		
8,600.0	7,770.0	8,305.2	7,530.0	26.0	19.8	-73.56	-727.8	-140.8	848.3	810.4	37.88	22.393		
8,700.0	7,770.0	8,405.2	7,530.0	27.0	21.1	-73.55	-827.8	-141.5	847.6	807.2	40.43	20.967		
8,800.0	7,770.0	8,505.1	7,530.0	28.1	22.5	-73.54	-927.8	-142.2	846.9	803.9	43.08	19.658		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
8,900.0	7,770.0	8,605.1	7,530.0	29.2	23.9	-73.52	-1,027.8	-142.9	846.3	800.4	45.84	18.463	
9,000.0	7,770.0	8,705.1	7,530.0	30.5	25.4	-73.51	-1,127.8	-143.6	845.6	796.9	48.66	17.377	
9,100.0	7,770.0	8,805.1	7,530.0	31.7	26.9	-73.50	-1,227.7	-144.3	844.9	793.4	51.55	16.389	
9,200.0	7,770.0	8,905.1	7,530.0	33.0	28.4	-73.48	-1,327.7	-145.0	844.3	789.8	54.50	15.491	
9,300.0	7,770.0	9,005.1	7,530.0	34.4	30.0	-73.47	-1,427.7	-145.7	843.6	786.1	57.49	14.674	
9,400.0	7,770.0	9,105.1	7,530.0	35.7	31.5	-73.46	-1,527.7	-146.4	842.9	782.4	60.52	13.928	
9,500.0	7,770.0	9,205.1	7,530.0	37.1	33.1	-73.44	-1,627.7	-147.1	842.3	778.7	63.58	13.247	
9,600.0	7,770.0	9,305.1	7,530.0	38.6	34.7	-73.43	-1,727.7	-147.8	841.6	774.9	66.67	12.623	
9,700.0	7,770.0	9,405.1	7,530.0	40.0	36.4	-73.42	-1,827.7	-148.5	840.9	771.1	69.79	12.050	
9,800.0	7,770.0	9,505.1	7,530.0	41.5	38.0	-73.40	-1,927.7	-149.2	840.2	767.3	72.92	11.523	
9,900.0	7,770.0	9,605.1	7,530.0	43.0	39.6	-73.39	-2,027.7	-149.9	839.6	763.5	76.08	11.036	
10,000.0	7,770.0	9,705.1	7,530.0	44.6	41.3	-73.38	-2,127.7	-150.6	838.9	759.7	79.25	10.586	
10,100.0	7,770.0	9,805.1	7,530.0	46.1	43.0	-73.36	-2,227.7	-151.3	838.2	755.8	82.43	10.169	
10,200.0	7,770.0	9,905.1	7,530.0	47.7	44.6	-73.35	-2,327.7	-152.0	837.6	751.9	85.63	9.781	
10,300.0	7,770.0	10,005.1	7,530.0	49.2	46.3	-73.33	-2,427.7	-152.7	836.9	748.1	88.84	9.420	
10,400.0	7,770.0	10,105.1	7,530.0	50.8	48.0	-73.32	-2,527.7	-153.4	836.2	744.2	92.06	9.083	
10,500.0	7,770.0	10,205.1	7,530.0	52.4	49.7	-73.31	-2,627.7	-154.1	835.6	740.3	95.29	8.769	
10,600.0	7,770.0	10,305.1	7,530.0	54.0	51.4	-73.29	-2,727.7	-154.8	834.9	736.4	98.53	8.474	
10,700.0	7,770.0	10,405.1	7,530.0	55.6	53.1	-73.28	-2,827.7	-155.5	834.2	732.5	101.77	8.197	
10,800.0	7,770.0	10,505.1	7,530.0	57.2	54.8	-73.27	-2,927.7	-156.2	833.6	728.5	105.02	7.937	
10,900.0	7,770.0	10,605.1	7,530.0	58.9	56.5	-73.25	-3,027.7	-156.9	832.9	724.6	108.28	7.692	
11,000.0	7,770.0	10,705.1	7,530.0	60.5	58.2	-73.24	-3,127.7	-157.6	832.2	720.7	111.54	7.461	
11,100.0	7,770.0	10,805.1	7,530.0	62.2	59.9	-73.22	-3,227.7	-158.3	831.6	716.8	114.80	7.243	
11,200.0	7,770.0	10,905.1	7,530.0	63.8	61.6	-73.21	-3,327.6	-159.0	830.9	712.8	118.08	7.037	
11,300.0	7,770.0	11,005.1	7,530.0	65.5	63.3	-73.20	-3,427.6	-159.7	830.2	708.9	121.35	6.841	
11,400.0	7,770.0	11,105.1	7,530.0	67.1	65.0	-73.18	-3,527.6	-160.4	829.6	704.9	124.63	6.656	
11,500.0	7,770.0	11,205.1	7,530.0	68.8	66.7	-73.17	-3,627.6	-161.1	828.9	701.0	127.91	6.480	
11,600.0	7,770.0	11,305.1	7,530.0	70.4	68.5	-73.15	-3,727.6	-161.8	828.2	697.0	131.20	6.313	
11,700.0	7,770.0	11,405.1	7,530.0	72.1	70.2	-73.14	-3,827.6	-162.5	827.5	693.1	134.48	6.154	
11,800.0	7,770.0	11,505.1	7,530.0	73.8	71.9	-73.13	-3,927.6	-163.2	826.9	689.1	137.77	6.002	
11,900.0	7,770.0	11,605.1	7,530.0	75.5	73.6	-73.11	-4,027.6	-163.9	826.2	685.1	141.07	5.857	
12,000.0	7,770.0	11,705.1	7,530.0	77.1	75.3	-73.10	-4,127.6	-164.5	825.5	681.2	144.36	5.719	
12,100.0	7,770.0	11,805.1	7,530.0	78.8	77.1	-73.08	-4,227.6	-165.2	824.9	677.2	147.66	5.586	
12,200.0	7,770.0	11,905.1	7,530.0	80.5	78.8	-73.07	-4,327.6	-165.9	824.2	673.3	150.95	5.460	
12,300.0	7,770.0	12,005.1	7,530.0	82.2	80.5	-73.06	-4,427.6	-166.6	823.5	669.3	154.25	5.339	
12,400.0	7,770.0	12,105.1	7,530.0	83.9	82.3	-73.04	-4,527.6	-167.3	822.9	665.3	157.55	5.223	
12,500.0	7,770.0	12,205.1	7,530.0	85.6	84.0	-73.03	-4,627.6	-168.0	822.2	661.3	160.86	5.111	
12,600.0	7,770.0	12,305.1	7,530.0	87.3	85.7	-73.01	-4,727.6	-168.7	821.5	657.4	164.16	5.004	
12,700.0	7,770.0	12,405.1	7,530.0	89.0	87.5	-73.00	-4,827.6	-169.4	820.9	653.4	167.47	4.902	
12,800.0	7,770.0	12,505.1	7,530.0	90.7	89.2	-72.99	-4,927.6	-170.1	820.2	649.4	170.77	4.803	
12,900.0	7,770.0	12,605.0	7,530.0	92.4	90.9	-72.97	-5,027.6	-170.8	819.5	645.5	174.08	4.708	
13,000.0	7,770.0	12,705.0	7,530.0	94.1	92.7	-72.96	-5,127.6	-171.5	818.9	641.5	177.39	4.616	
13,100.0	7,770.0	12,805.0	7,530.0	95.8	94.4	-72.94	-5,227.6	-172.2	818.2	637.5	180.69	4.528	
13,200.0	7,770.0	12,905.0	7,530.0	97.5	96.1	-72.93	-5,327.5	-172.9	817.5	633.5	184.00	4.443	
13,300.0	7,770.0	13,005.0	7,530.0	99.2	97.9	-72.91	-5,427.5	-173.6	816.9	629.6	187.31	4.361	
13,400.0	7,770.0	13,105.0	7,530.0	101.0	99.6	-72.90	-5,527.5	-174.3	816.2	625.6	190.62	4.282	
13,500.0	7,770.0	13,205.0	7,530.0	102.7	101.3	-72.88	-5,627.5	-175.0	815.5	621.6	193.94	4.205	
13,600.0	7,770.0	13,305.0	7,530.0	104.4	103.1	-72.87	-5,727.5	-175.7	814.9	617.6	197.25	4.131	
13,700.0	7,770.0	13,405.0	7,530.0	106.1	104.8	-72.86	-5,827.5	-176.4	814.2	613.6	200.56	4.060	
13,800.0	7,770.0	13,505.0	7,530.0	107.8	106.6	-72.84	-5,927.5	-177.1	813.5	609.7	203.87	3.990	
13,900.0	7,770.0	13,605.0	7,530.0	109.5	108.3	-72.83	-6,027.5	-177.8	812.9	605.7	207.18	3.923	
14,000.0	7,770.0	13,705.0	7,530.0	111.3	110.0	-72.81	-6,127.5	-178.5	812.2	601.7	210.50	3.858	

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		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)					
14,100.0	7,770.0	13,805.0	7,530.0	113.0	111.8	-72.80	-6,227.5	-179.2	811.5	597.7	213.81	3.796	
14,200.0	7,770.0	13,905.0	7,530.0	114.7	113.5	-72.78	-6,327.5	-179.9	810.9	593.7	217.12	3.735	
14,300.0	7,770.0	14,005.0	7,530.0	116.4	115.3	-72.77	-6,427.5	-180.6	810.2	589.8	220.44	3.675	
14,400.0	7,770.0	14,105.0	7,530.0	118.2	117.0	-72.75	-6,527.5	-181.3	809.5	585.8	223.75	3.618	
14,500.0	7,770.0	14,205.0	7,530.0	119.9	118.8	-72.74	-6,627.5	-182.0	808.9	581.8	227.06	3.562	
14,600.0	7,770.0	14,305.0	7,530.0	121.6	120.5	-72.72	-6,727.5	-182.7	808.2	577.8	230.38	3.508	
14,700.0	7,770.0	14,405.0	7,530.0	123.3	122.2	-72.71	-6,827.5	-183.4	807.5	573.8	233.69	3.456	
14,800.0	7,770.0	14,505.0	7,530.0	125.1	124.0	-72.70	-6,927.5	-184.1	806.9	569.9	237.00	3.404	
14,900.0	7,770.0	14,605.0	7,530.0	126.8	125.7	-72.68	-7,027.5	-184.8	806.2	565.9	240.32	3.355	
15,000.0	7,770.0	14,705.0	7,530.0	128.5	127.5	-72.67	-7,127.5	-185.5	805.5	561.9	243.63	3.306	
15,100.0	7,770.0	14,805.0	7,530.0	130.2	129.2	-72.65	-7,227.5	-186.2	804.9	557.9	246.94	3.259	
15,200.0	7,770.0	14,905.0	7,530.0	132.0	131.0	-72.64	-7,327.5	-186.9	804.2	553.9	250.26	3.213	
15,300.0	7,770.0	15,005.0	7,530.0	133.7	132.7	-72.62	-7,427.4	-187.6	803.5	550.0	253.57	3.169	
15,400.0	7,770.0	15,105.0	7,530.0	135.4	134.4	-72.61	-7,527.4	-188.3	802.9	546.0	256.88	3.125	
15,500.0	7,770.0	15,205.0	7,530.0	137.2	136.2	-72.59	-7,627.4	-189.0	802.2	542.0	260.20	3.083	
15,600.0	7,770.0	15,305.0	7,530.0	138.9	137.9	-72.58	-7,727.4	-189.7	801.5	538.0	263.51	3.042	
15,700.0	7,770.0	15,405.0	7,530.0	140.6	139.7	-72.56	-7,827.4	-190.4	800.9	534.0	266.82	3.002	
15,800.0	7,770.0	15,505.0	7,530.0	142.4	141.4	-72.55	-7,927.4	-191.1	800.2	530.1	270.13	2.962	
15,900.0	7,770.0	15,605.0	7,530.0	144.1	143.2	-72.53	-8,027.4	-191.8	799.5	526.1	273.45	2.924	
16,000.0	7,770.0	15,705.0	7,530.0	145.8	144.9	-72.52	-8,127.4	-192.5	798.9	522.1	276.76	2.887	
16,100.0	7,770.0	15,805.0	7,530.0	147.6	146.7	-72.50	-8,227.4	-193.2	798.2	518.1	280.07	2.850	
16,200.0	7,770.0	15,905.0	7,530.0	149.3	148.4	-72.49	-8,327.4	-193.9	797.5	514.2	283.38	2.814	
16,300.0	7,770.0	16,005.0	7,530.0	151.0	150.2	-72.47	-8,427.4	-194.6	796.9	510.2	286.69	2.780	
16,400.0	7,770.0	16,105.0	7,530.0	152.8	151.9	-72.46	-8,527.4	-195.3	796.2	506.2	290.00	2.746	
16,500.0	7,770.0	16,205.0	7,530.0	154.5	153.7	-72.44	-8,627.4	-196.0	795.5	502.2	293.31	2.712	
16,600.0	7,770.0	16,305.0	7,530.0	156.3	155.4	-72.43	-8,727.4	-196.7	794.9	498.3	296.62	2.680	
16,700.0	7,770.0	16,405.0	7,530.0	158.0	157.2	-72.41	-8,827.4	-197.4	794.2	494.3	299.93	2.648	
16,800.0	7,770.0	16,505.0	7,530.0	159.7	158.9	-72.40	-8,927.4	-198.1	793.5	490.3	303.24	2.617	
16,900.0	7,770.0	16,605.0	7,530.0	161.5	160.6	-72.38	-9,027.4	-198.7	792.9	486.3	306.55	2.586	
17,000.0	7,770.0	16,704.9	7,530.0	163.2	162.4	-72.36	-9,127.4	-199.4	792.2	482.4	309.86	2.557	
17,100.0	7,770.0	16,804.9	7,530.0	164.9	164.1	-72.35	-9,227.4	-200.1	791.5	478.4	313.17	2.528	
17,200.0	7,770.0	16,904.9	7,530.0	166.7	165.9	-72.33	-9,327.4	-200.8	790.9	474.4	316.48	2.499	
17,300.0	7,770.0	17,004.9	7,530.0	168.4	167.6	-72.32	-9,427.3	-201.5	790.2	470.4	319.78	2.471	
17,400.0	7,770.0	17,104.9	7,530.0	170.2	169.4	-72.30	-9,527.3	-202.2	789.6	466.5	323.09	2.444	
17,500.0	7,770.0	17,204.9	7,530.0	171.9	171.1	-72.29	-9,627.3	-202.9	788.9	462.5	326.40	2.417	
17,600.0	7,770.0	17,304.9	7,530.0	173.6	172.9	-72.27	-9,727.3	-203.6	788.2	458.5	329.70	2.391	
17,701.3	7,770.0	17,406.3	7,530.0	175.4	174.7	-72.26	-9,828.7	-204.3	787.6	454.5	333.05	2.365 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1H-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	40.0	40.0					
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	40.0	40.0	39.7	0.30	131.779		
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	40.0	40.0	39.4	0.65	61.309		
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	40.0	40.0	39.0	1.00	39.947		
350.0	350.0	350.0	350.0	0.6	0.6	90.00	0.0	40.0	40.0	38.8	1.18	34.020 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	158.27	0.0	40.0	40.2	38.9	1.35	29.775		
500.0	500.0	500.0	500.0	0.9	0.8	159.15	0.0	40.0	41.8	40.1	1.70	24.619		
600.0	599.9	599.9	599.9	1.0	1.0	160.44	0.2	40.0	45.1	43.1	2.05	22.022		
700.0	699.8	699.8	699.8	1.2	1.2	160.43	2.0	40.0	50.0	47.6	2.40	20.841		
800.0	799.5	799.6	799.6	1.4	1.4	159.25	5.4	40.1	56.5	53.7	2.76	20.509		
900.0	899.2	899.3	899.1	1.6	1.6	157.44	10.5	40.2	64.7	61.5	3.12	20.732		
1,000.0	998.6	998.8	998.4	1.9	1.7	156.31	15.9	40.3	74.5	71.0	3.49	21.347		
1,100.0	1,097.9	1,098.1	1,097.6	2.1	1.9	155.92	21.3	40.3	85.9	82.0	3.86	22.233		
1,185.5	1,182.5	1,182.9	1,182.3	2.4	2.1	155.98	25.9	40.4	96.9	92.7	4.19	23.150		
1,200.0	1,196.9	1,197.3	1,196.6	2.4	2.1	156.02	26.7	40.4	98.9	94.6	4.24	23.312		
1,300.0	1,295.8	1,296.4	1,295.6	2.7	2.3	156.27	32.1	40.5	112.4	107.8	4.62	24.311		
1,400.0	1,394.8	1,395.4	1,394.5	3.0	2.5	156.46	37.4	40.6	126.0	121.0	5.01	25.148		
1,500.0	1,493.7	1,494.5	1,493.4	3.3	2.7	156.62	42.8	40.6	139.5	134.1	5.40	25.860		
1,600.0	1,592.6	1,593.6	1,592.4	3.6	2.9	156.75	48.2	40.7	153.1	147.3	5.78	26.471		
1,700.0	1,691.6	1,692.7	1,691.3	3.9	3.1	156.86	53.6	40.8	166.7	160.5	6.17	27.001		
1,800.0	1,790.5	1,791.7	1,790.2	4.2	3.3	156.95	58.9	40.9	180.2	173.7	6.56	27.466		
1,900.0	1,889.5	1,890.8	1,889.1	4.5	3.5	157.03	64.3	41.0	193.8	186.8	6.95	27.876		
2,000.0	1,988.4	1,989.9	1,988.1	4.8	3.7	157.10	69.7	41.0	207.4	200.0	7.34	28.241		
2,100.0	2,087.3	2,089.0	2,087.0	5.1	3.9	157.16	75.1	41.1	220.9	213.2	7.73	28.567		
2,200.0	2,186.3	2,188.0	2,185.9	5.4	4.1	157.21	80.4	41.2	234.5	226.4	8.12	28.861		
2,300.0	2,285.2	2,287.1	2,284.9	5.7	4.3	157.26	85.8	41.3	248.0	239.5	8.52	29.126		
2,400.0	2,384.2	2,386.2	2,383.8	6.0	4.5	157.30	91.2	41.3	261.6	252.7	8.91	29.368		
2,500.0	2,483.1	2,485.3	2,482.7	6.3	4.6	157.34	96.6	41.4	275.2	265.9	9.30	29.588		
2,600.0	2,582.0	2,584.3	2,581.6	6.6	4.8	157.37	101.9	41.5	288.7	279.0	9.69	29.790		
2,700.0	2,681.0	2,683.4	2,680.6	6.9	5.0	157.40	107.3	41.6	302.3	292.2	10.08	29.975		
2,800.0	2,779.9	2,782.5	2,779.5	7.2	5.2	157.43	112.7	41.7	315.9	305.4	10.48	30.146		
2,900.0	2,878.8	2,881.6	2,878.4	7.5	5.4	157.46	118.1	41.7	329.4	318.6	10.87	30.305		
3,000.0	2,977.8	2,980.6	2,977.4	7.8	5.6	157.48	123.5	41.8	343.0	331.7	11.26	30.452		
3,100.0	3,076.7	3,079.7	3,076.3	8.1	5.8	157.50	128.8	41.9	356.6	344.9	11.66	30.589		
3,200.0	3,175.7	3,178.8	3,175.2	8.4	6.0	157.52	134.2	42.0	370.1	358.1	12.05	30.716		
3,300.0	3,274.6	3,277.9	3,274.2	8.7	6.2	157.54	139.6	42.1	383.7	371.2	12.44	30.836		
3,400.0	3,373.5	3,376.9	3,373.1	9.1	6.4	157.56	145.0	42.1	397.3	384.4	12.84	30.947		
3,500.0	3,472.5	3,476.0	3,472.0	9.4	6.6	157.58	150.3	42.2	410.8	397.6	13.23	31.052		
3,600.0	3,571.4	3,575.1	3,570.9	9.7	6.8	157.59	155.7	42.3	424.4	410.8	13.62	31.151		
3,700.0	3,670.4	3,674.2	3,669.9	10.0	7.0	157.61	161.1	42.4	437.9	423.9	14.02	31.244		
3,800.0	3,769.3	3,773.2	3,768.8	10.3	7.2	157.62	166.5	42.4	451.5	437.1	14.41	31.332		
3,900.0	3,868.2	3,872.3	3,867.7	10.6	7.4	157.64	171.8	42.5	465.1	450.3	14.80	31.415		
4,000.0	3,967.2	3,971.4	3,966.7	10.9	7.6	157.65	177.2	42.6	478.6	463.4	15.20	31.493		
4,100.0	4,066.1	4,070.5	4,065.6	11.2	7.8	157.66	182.6	42.7	492.2	476.6	15.59	31.568		
4,200.0	4,165.1	4,169.5	4,164.5	11.5	8.0	157.67	188.0	42.8	505.8	489.8	15.99	31.639		
4,300.0	4,264.0	4,268.6	4,263.5	11.8	8.2	157.68	193.3	42.8	519.3	503.0	16.38	31.706		
4,400.0	4,362.9	4,367.7	4,362.4	12.1	8.4	157.69	198.7	42.9	532.9	516.1	16.77	31.770		
4,500.0	4,461.9	4,466.8	4,461.3	12.4	8.6	157.70	204.1	43.0	546.5	529.3	17.17	31.831		
4,600.0	4,560.8	4,565.9	4,560.2	12.8	8.8	157.71	209.5	43.1	560.0	542.5	17.56	31.889		
4,700.0	4,659.7	4,664.9	4,659.2	13.1	9.0	157.72	214.8	43.2	573.6	555.6	17.96	31.945		
4,800.0	4,758.7	4,764.0	4,758.1	13.4	9.2	157.73	220.2	43.2	587.2	568.8	18.35	31.998		
4,900.0	4,857.6	4,863.1	4,857.0	13.7	9.4	157.73	225.6	43.3	600.7	582.0	18.74	32.049		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1H-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		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			
5,000.0	4,956.6	4,962.2	4,956.0	14.0	9.5	157.74	231.0	43.4	614.3	595.2	19.14	32.098		
5,100.0	5,055.5	5,061.2	5,054.9	14.3	9.7	157.75	236.3	43.5	627.9	608.3	19.53	32.145		
5,200.0	5,154.4	5,160.3	5,153.8	14.6	9.9	157.76	241.7	43.5	641.4	621.5	19.93	32.190		
5,300.0	5,253.4	5,259.4	5,252.7	14.9	10.1	157.76	247.1	43.6	655.0	634.7	20.32	32.233		
5,400.0	5,352.3	5,358.5	5,351.7	15.2	10.3	157.77	252.5	43.7	668.6	647.8	20.71	32.274		
5,500.0	5,451.3	5,457.5	5,450.6	15.5	10.5	157.77	257.8	43.8	682.1	661.0	21.11	32.314		
5,600.0	5,550.2	5,556.6	5,549.5	15.8	10.7	157.78	263.2	43.9	695.7	674.2	21.50	32.353		
5,700.0	5,649.1	5,655.7	5,648.5	16.1	10.9	157.79	268.6	43.9	709.2	687.4	21.90	32.390		
5,800.0	5,748.1	5,754.8	5,747.4	16.5	11.1	157.79	274.0	44.0	722.8	700.5	22.29	32.425		
5,900.0	5,847.0	5,853.8	5,846.3	16.8	11.3	157.80	279.4	44.1	736.4	713.7	22.69	32.460		
6,000.0	5,945.9	5,952.9	5,945.3	17.1	11.5	157.80	284.7	44.2	749.9	726.9	23.08	32.493		
6,100.0	6,044.9	6,052.0	6,044.2	17.4	11.7	157.81	290.1	44.3	763.5	740.0	23.47	32.525		
6,200.0	6,143.8	6,151.1	6,143.1	17.7	11.9	157.81	295.5	44.3	777.1	753.2	23.87	32.556		
6,300.0	6,242.8	6,250.1	6,242.0	18.0	12.1	157.82	300.9	44.4	790.6	766.4	24.26	32.586		
6,400.0	6,341.7	6,349.2	6,341.0	18.3	12.3	157.82	306.2	44.5	804.2	779.5	24.66	32.615		
6,500.0	6,440.6	6,448.3	6,439.9	18.6	12.5	157.82	311.6	44.6	817.8	792.7	25.05	32.643		
6,600.0	6,539.6	6,547.4	6,538.8	18.9	12.7	157.83	317.0	44.6	831.3	805.9	25.45	32.670		
6,700.0	6,638.5	6,646.4	6,637.8	19.2	12.9	157.83	322.4	44.7	844.9	819.1	25.84	32.696		
6,800.0	6,737.5	6,745.5	6,736.7	19.6	13.1	157.84	327.7	44.8	858.5	832.2	26.24	32.722		
6,900.0	6,836.4	6,844.6	6,835.6	19.9	13.3	157.84	333.1	44.9	872.0	845.4	26.63	32.747		
7,000.0	6,935.3	6,943.7	6,934.6	20.2	13.5	157.84	338.5	45.0	885.6	858.6	27.02	32.771		
7,087.6	7,022.0	7,030.5	7,021.2	20.4	13.7	157.85	343.2	45.0	897.5	870.1	27.37	32.793		
7,100.0	7,034.3	7,042.8	7,033.5	20.5	13.7	164.53	343.6	45.0	899.2	871.8	27.39	32.822		
7,150.0	7,083.8	7,092.4	7,083.1	20.6	13.7	-166.18	343.3	45.1	906.0	878.5	27.46	32.995		
7,200.0	7,133.2	7,142.0	7,132.6	20.7	13.8	-142.24	339.6	45.1	912.7	885.3	27.47	33.221		
7,250.0	7,182.3	7,191.6	7,181.6	20.8	13.8	-127.10	332.4	45.2	919.5	892.0	27.45	33.493		
7,300.0	7,230.8	7,241.1	7,230.0	20.9	13.8	-117.70	321.9	45.2	926.1	898.7	27.40	33.802		
7,350.0	7,278.4	7,290.7	7,277.6	21.0	13.7	-111.51	308.0	45.2	932.6	905.3	27.32	34.139		
7,400.0	7,325.0	7,340.3	7,324.1	21.0	13.7	-107.14	290.9	45.3	939.0	911.8	27.22	34.492		
7,450.0	7,370.3	7,389.9	7,369.4	21.1	13.7	-103.89	270.6	45.3	945.2	918.1	27.12	34.850		
7,500.0	7,414.0	7,439.5	7,413.1	21.1	13.6	-101.37	247.2	45.3	951.2	924.2	27.03	35.198		
7,550.0	7,456.1	7,489.1	7,455.2	21.2	13.5	-99.35	220.9	45.4	957.0	930.1	26.94	35.521		
7,600.0	7,496.2	7,538.8	7,495.3	21.2	13.5	-97.69	191.6	45.4	962.5	935.6	26.88	35.804		
7,650.0	7,534.2	7,588.5	7,533.4	21.2	13.5	-96.30	159.6	45.4	967.7	940.8	26.86	36.031		
7,700.0	7,569.9	7,638.3	7,569.2	21.3	13.4	-95.13	125.1	45.5	972.6	945.7	26.88	36.187		
7,750.0	7,603.1	7,688.1	7,602.5	21.4	13.5	-94.13	88.1	45.5	977.2	950.2	26.95	36.256		
7,800.0	7,633.7	7,737.9	7,633.1	21.4	13.5	-93.27	48.8	45.5	981.3	954.3	27.09	36.228		
7,850.0	7,661.5	7,787.8	7,661.0	21.5	13.6	-92.54	7.5	45.5	985.2	957.9	27.29	36.094		
7,900.0	7,686.3	7,837.7	7,686.0	21.6	13.7	-91.92	-35.8	45.6	988.6	961.0	27.58	35.848		
7,950.0	7,708.1	7,887.7	7,707.9	21.8	13.9	-91.40	-80.6	45.6	991.5	963.6	27.94	35.491		
8,000.0	7,726.8	7,937.7	7,726.7	22.0	14.1	-90.97	-127.0	45.6	994.1	965.7	28.38	35.027		
8,050.0	7,742.1	7,987.7	7,742.1	22.2	14.3	-90.62	-174.5	45.6	996.2	967.3	28.91	34.464		
8,100.0	7,754.2	8,037.7	7,754.3	22.4	14.7	-90.35	-223.0	45.6	997.9	968.4	29.51	33.813		
8,150.0	7,762.9	8,087.7	7,763.0	22.6	15.0	-90.16	-272.3	45.6	999.1	968.9	30.19	33.090		
8,200.0	7,768.2	8,137.8	7,768.2	22.9	15.4	-90.04	-322.1	45.6	999.8	968.8	30.95	32.308		
8,251.3	7,770.0	8,189.2	7,770.0	23.2	15.9	-90.00	-373.4	45.6	1,000.0	968.3	31.78	31.466		
8,300.0	7,770.0	8,237.9	7,770.0	23.5	16.3	-90.00	-422.1	45.6	1,000.0	967.3	32.72	30.561		
8,400.0	7,770.0	8,337.9	7,770.0	24.2	17.4	-90.00	-522.1	45.6	1,000.0	965.2	34.81	28.730		
8,500.0	7,770.0	8,437.9	7,770.0	25.1	18.5	-90.00	-622.1	45.6	1,000.0	962.9	37.11	26.949		
8,600.0	7,770.0	8,537.9	7,770.0	26.0	19.8	-90.00	-722.1	45.6	1,000.0	960.4	39.59	25.262		
8,700.0	7,770.0	8,637.9	7,770.0	27.0	21.1	-90.00	-822.1	45.6	1,000.0	957.8	42.21	23.691		
8,800.0	7,770.0	8,737.9	7,770.0	28.1	22.5	-90.00	-922.1	45.6	1,000.0	955.1	44.96	22.244		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1H-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,900.0	7,770.0	8,837.9	7,770.0	29.2	23.9	-90.00	-1,022.1	45.6	1,000.0	952.2	47.80	20.920		
9,000.0	7,770.0	8,937.9	7,770.0	30.5	25.3	-90.00	-1,122.1	45.6	1,000.0	949.3	50.73	19.712		
9,100.0	7,770.0	9,037.9	7,770.0	31.7	26.8	-90.00	-1,222.1	45.6	1,000.0	946.3	53.73	18.612		
9,200.0	7,770.0	9,137.9	7,770.0	33.0	28.4	-90.00	-1,322.1	45.6	1,000.0	943.2	56.79	17.610		
9,300.0	7,770.0	9,237.9	7,770.0	34.4	29.9	-90.00	-1,422.1	45.6	1,000.0	940.1	59.89	16.697		
9,400.0	7,770.0	9,337.9	7,770.0	35.7	31.5	-90.00	-1,522.1	45.6	1,000.0	937.0	63.04	15.863		
9,500.0	7,770.0	9,437.9	7,770.0	37.1	33.1	-90.00	-1,622.1	45.6	1,000.0	933.8	66.23	15.100		
9,600.0	7,770.0	9,537.9	7,770.0	38.6	34.7	-90.00	-1,722.1	45.6	1,000.0	930.6	69.44	14.401		
9,700.0	7,770.0	9,637.9	7,770.0	40.0	36.3	-90.00	-1,822.1	45.6	1,000.0	927.4	72.68	13.759		
9,800.0	7,770.0	9,737.9	7,770.0	41.5	38.0	-90.00	-1,922.1	45.6	1,000.0	924.1	75.95	13.167		
9,900.0	7,770.0	9,837.9	7,770.0	43.0	39.6	-90.00	-2,022.1	45.6	1,000.0	920.8	79.24	12.621		
10,000.0	7,770.0	9,937.9	7,770.0	44.6	41.3	-90.00	-2,122.1	45.6	1,000.0	917.5	82.54	12.115		
10,100.0	7,770.0	10,037.9	7,770.0	46.1	42.9	-90.00	-2,222.1	45.6	1,000.0	914.2	85.87	11.647		
10,200.0	7,770.0	10,137.9	7,770.0	47.7	44.6	-90.00	-2,322.1	45.6	1,000.0	910.8	89.20	11.211		
10,300.0	7,770.0	10,237.9	7,770.0	49.2	46.3	-90.00	-2,422.1	45.6	1,000.0	907.5	92.55	10.805		
10,400.0	7,770.0	10,337.9	7,770.0	50.8	47.9	-90.00	-2,522.1	45.6	1,000.0	904.1	95.91	10.427		
10,500.0	7,770.0	10,437.9	7,770.0	52.4	49.6	-90.00	-2,622.1	45.6	1,000.0	900.8	99.28	10.073		
10,600.0	7,770.0	10,537.9	7,770.0	54.0	51.3	-90.00	-2,722.1	45.6	1,000.0	897.4	102.66	9.741		
10,700.0	7,770.0	10,637.9	7,770.0	55.6	53.0	-90.00	-2,822.1	45.6	1,000.0	894.0	106.05	9.430		
10,800.0	7,770.0	10,737.9	7,770.0	57.2	54.7	-90.00	-2,922.1	45.6	1,000.0	890.6	109.44	9.138		
10,900.0	7,770.0	10,837.9	7,770.0	58.9	56.4	-90.00	-3,022.1	45.6	1,000.0	887.2	112.84	8.862		
11,000.0	7,770.0	10,937.9	7,770.0	60.5	58.1	-90.00	-3,122.1	45.6	1,000.0	883.8	116.25	8.602		
11,100.0	7,770.0	11,037.9	7,770.0	62.2	59.8	-90.00	-3,222.1	45.6	1,000.0	880.4	119.67	8.357		
11,200.0	7,770.0	11,137.9	7,770.0	63.8	61.5	-90.00	-3,322.1	45.6	1,000.0	877.0	123.09	8.125		
11,300.0	7,770.0	11,237.9	7,770.0	65.5	63.2	-90.00	-3,422.1	45.6	1,000.0	873.5	126.51	7.905		
11,400.0	7,770.0	11,337.9	7,770.0	67.1	65.0	-90.00	-3,522.1	45.6	1,000.0	870.1	129.94	7.696		
11,500.0	7,770.0	11,437.9	7,770.0	68.8	66.7	-90.00	-3,622.1	45.6	1,000.0	866.7	133.37	7.498		
11,600.0	7,770.0	11,537.9	7,770.0	70.4	68.4	-90.00	-3,722.1	45.6	1,000.0	863.2	136.81	7.310		
11,700.0	7,770.0	11,637.9	7,770.0	72.1	70.1	-90.00	-3,822.1	45.6	1,000.0	859.8	140.25	7.130		
11,800.0	7,770.0	11,737.9	7,770.0	73.8	71.8	-90.00	-3,922.1	45.6	1,000.0	856.3	143.69	6.960		
11,900.0	7,770.0	11,837.9	7,770.0	75.5	73.6	-90.00	-4,022.1	45.6	1,000.0	852.9	147.14	6.796		
12,000.0	7,770.0	11,937.9	7,770.0	77.1	75.3	-90.00	-4,122.1	45.6	1,000.0	849.5	150.59	6.641		
12,100.0	7,770.0	12,037.9	7,770.0	78.8	77.0	-90.00	-4,222.1	45.6	1,000.0	846.0	154.04	6.492		
12,200.0	7,770.0	12,137.9	7,770.0	80.5	78.7	-90.00	-4,322.1	45.6	1,000.0	842.5	157.50	6.350		
12,300.0	7,770.0	12,237.9	7,770.0	82.2	80.5	-90.00	-4,422.1	45.6	1,000.0	839.1	160.95	6.213		
12,400.0	7,770.0	12,337.9	7,770.0	83.9	82.2	-90.00	-4,522.1	45.6	1,000.0	835.6	164.41	6.082		
12,500.0	7,770.0	12,437.9	7,770.0	85.6	83.9	-90.00	-4,622.1	45.6	1,000.0	832.2	167.87	5.957		
12,600.0	7,770.0	12,537.9	7,770.0	87.3	85.7	-90.00	-4,722.1	45.6	1,000.0	828.7	171.34	5.837		
12,700.0	7,770.0	12,637.9	7,770.0	89.0	87.4	-90.00	-4,822.1	45.6	1,000.0	825.2	174.80	5.721		
12,800.0	7,770.0	12,737.9	7,770.0	90.7	89.1	-90.00	-4,922.1	45.6	1,000.0	821.8	178.27	5.610		
12,900.0	7,770.0	12,837.9	7,770.0	92.4	90.9	-90.00	-5,022.1	45.6	1,000.0	818.3	181.74	5.503		
13,000.0	7,770.0	12,937.9	7,770.0	94.1	92.6	-90.00	-5,122.1	45.6	1,000.0	814.8	185.21	5.400		
13,100.0	7,770.0	13,037.9	7,770.0	95.8	94.3	-90.00	-5,222.1	45.6	1,000.0	811.4	188.68	5.300		
13,200.0	7,770.0	13,137.9	7,770.0	97.5	96.1	-90.00	-5,322.1	45.6	1,000.0	807.9	192.15	5.205		
13,300.0	7,770.0	13,237.9	7,770.0	99.2	97.8	-90.00	-5,422.1	45.6	1,000.0	804.4	195.62	5.112		
13,400.0	7,770.0	13,337.9	7,770.0	101.0	99.5	-90.00	-5,522.1	45.6	1,000.0	800.9	199.10	5.023		
13,500.0	7,770.0	13,437.9	7,770.0	102.7	101.3	-90.00	-5,622.1	45.6	1,000.0	797.5	202.57	4.937		
13,600.0	7,770.0	13,537.9	7,770.0	104.4	103.0	-90.00	-5,722.1	45.6	1,000.0	794.0	206.05	4.853		
13,700.0	7,770.0	13,637.9	7,770.0	106.1	104.8	-90.00	-5,822.1	45.6	1,000.0	790.5	209.53	4.773		
13,800.0	7,770.0	13,737.9	7,770.0	107.8	106.5	-90.00	-5,922.1	45.6	1,000.0	787.0	213.01	4.695		
13,900.0	7,770.0	13,837.9	7,770.0	109.5	108.2	-90.00	-6,022.1	45.6	1,000.0	783.6	216.49	4.619		
14,000.0	7,770.0	13,937.9	7,770.0	111.3	110.0	-90.00	-6,122.1	45.6	1,000.0	780.1	219.97	4.546		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1H-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	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)						
14,100.0	7,770.0	14,037.9	7,770.0	113.0	111.7	-90.00	-6,222.1	45.6	1,000.0	776.6	223.45	4.475		
14,200.0	7,770.0	14,137.9	7,770.0	114.7	113.5	-90.00	-6,322.1	45.6	1,000.0	773.1	226.93	4.407		
14,300.0	7,770.0	14,237.9	7,770.0	116.4	115.2	-90.00	-6,422.1	45.6	1,000.0	769.6	230.42	4.340		
14,400.0	7,770.0	14,337.9	7,770.0	118.2	116.9	-90.00	-6,522.1	45.6	1,000.0	766.1	233.90	4.275		
14,500.0	7,770.0	14,437.9	7,770.0	119.9	118.7	-90.00	-6,622.1	45.6	1,000.0	762.7	237.39	4.213		
14,600.0	7,770.0	14,537.9	7,770.0	121.6	120.4	-90.00	-6,722.1	45.6	1,000.0	759.2	240.87	4.152		
14,700.0	7,770.0	14,637.9	7,770.0	123.3	122.2	-90.00	-6,822.1	45.6	1,000.0	755.7	244.36	4.093		
14,800.0	7,770.0	14,737.9	7,770.0	125.1	123.9	-90.00	-6,922.1	45.6	1,000.0	752.2	247.84	4.035		
14,900.0	7,770.0	14,837.9	7,770.0	126.8	125.7	-90.00	-7,022.1	45.6	1,000.0	748.7	251.33	3.979		
15,000.0	7,770.0	14,937.9	7,770.0	128.5	127.4	-90.00	-7,122.1	45.6	1,000.0	745.2	254.82	3.925		
15,100.0	7,770.0	15,037.9	7,770.0	130.2	129.1	-90.00	-7,222.1	45.6	1,000.0	741.7	258.31	3.872		
15,200.0	7,770.0	15,137.9	7,770.0	132.0	130.9	-90.00	-7,322.1	45.6	1,000.0	738.2	261.80	3.820		
15,300.0	7,770.0	15,237.9	7,770.0	133.7	132.6	-90.00	-7,422.1	45.6	1,000.0	734.8	265.29	3.770		
15,400.0	7,770.0	15,337.9	7,770.0	135.4	134.4	-90.00	-7,522.1	45.6	1,000.0	731.3	268.78	3.721		
15,500.0	7,770.0	15,437.9	7,770.0	137.2	136.1	-90.00	-7,622.1	45.6	1,000.0	727.8	272.27	3.673		
15,600.0	7,770.0	15,537.9	7,770.0	138.9	137.9	-90.00	-7,722.1	45.6	1,000.0	724.3	275.76	3.627		
15,700.0	7,770.0	15,637.9	7,770.0	140.6	139.6	-90.00	-7,822.1	45.6	1,000.0	720.8	279.25	3.581		
15,800.0	7,770.0	15,737.9	7,770.0	142.4	141.4	-90.00	-7,922.1	45.6	1,000.0	717.3	282.74	3.537		
15,900.0	7,770.0	15,837.9	7,770.0	144.1	143.1	-90.00	-8,022.1	45.6	1,000.0	713.8	286.23	3.494		
16,000.0	7,770.0	15,937.9	7,770.0	145.8	144.9	-90.00	-8,122.1	45.6	1,000.0	710.3	289.73	3.452		
16,100.0	7,770.0	16,037.9	7,770.0	147.6	146.6	-90.00	-8,222.1	45.6	1,000.0	706.8	293.22	3.411		
16,200.0	7,770.0	16,137.9	7,770.0	149.3	148.3	-90.00	-8,322.1	45.6	1,000.0	703.3	296.71	3.370		
16,300.0	7,770.0	16,237.9	7,770.0	151.0	150.1	-90.00	-8,422.1	45.6	1,000.0	699.8	300.21	3.331		
16,400.0	7,770.0	16,337.9	7,770.0	152.8	151.8	-90.00	-8,522.1	45.6	1,000.0	696.3	303.70	3.293		
16,500.0	7,770.0	16,437.9	7,770.0	154.5	153.6	-90.00	-8,622.1	45.6	1,000.0	692.9	307.19	3.255		
16,600.0	7,770.0	16,537.9	7,770.0	156.3	155.3	-90.00	-8,722.1	45.6	1,000.0	689.4	310.69	3.219		
16,700.0	7,770.0	16,637.9	7,770.0	158.0	157.1	-90.00	-8,822.1	45.6	1,000.0	685.9	314.18	3.183		
16,800.0	7,770.0	16,737.9	7,770.0	159.7	158.8	-90.00	-8,922.1	45.6	1,000.0	682.4	317.68	3.148		
16,900.0	7,770.0	16,837.9	7,770.0	161.5	160.6	-90.00	-9,022.1	45.6	1,000.0	678.9	321.17	3.114		
17,000.0	7,770.0	16,937.9	7,770.0	163.2	162.3	-90.00	-9,122.1	45.6	1,000.0	675.4	324.67	3.080		
17,100.0	7,770.0	17,037.9	7,770.0	164.9	164.1	-90.00	-9,222.1	45.6	1,000.0	671.9	328.17	3.047		
17,200.0	7,770.0	17,137.9	7,770.0	166.7	165.8	-90.00	-9,322.1	45.6	1,000.0	668.4	331.66	3.015		
17,300.0	7,770.0	17,237.9	7,770.0	168.4	167.6	-90.00	-9,422.1	45.6	1,000.0	664.9	335.16	2.984		
17,400.0	7,770.0	17,337.9	7,770.0	170.2	169.3	-90.00	-9,522.1	45.6	1,000.0	661.4	338.65	2.953		
17,500.0	7,770.0	17,437.9	7,770.0	171.9	171.1	-90.00	-9,622.1	45.6	1,000.0	657.9	342.15	2.923		
17,600.0	7,770.0	17,537.9	7,770.0	173.6	172.8	-90.00	-9,722.1	45.6	1,000.0	654.4	345.65	2.893		
17,701.3	7,770.0	17,639.2	7,770.0	175.4	174.6	-90.00	-9,823.4	45.6	1,000.1	650.9	349.19	2.864 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 11-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program:		0-Geolink MWD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	50.1	50.1					
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	50.1	50.1	49.8	0.30	164.955		
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	50.1	50.1	49.4	0.65	76.744		
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	50.1	50.1	49.1	1.00	50.004		
350.0	350.0	350.0	350.0	0.6	0.6	90.00	0.0	50.1	50.1	48.9	1.18	42.585 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	158.25	0.0	50.1	50.3	48.9	1.35	37.233		
500.0	500.0	500.0	500.0	0.9	0.8	158.96	0.0	50.1	51.9	50.2	1.70	30.545		
600.0	599.9	599.9	599.9	1.0	1.0	160.25	0.0	50.1	55.2	53.1	2.05	26.939		
700.0	699.8	699.3	699.3	1.2	1.2	161.19	0.7	50.6	60.6	58.2	2.40	25.263		
800.0	799.5	798.4	798.4	1.4	1.4	161.15	2.9	51.9	68.4	65.7	2.75	24.906		
900.0	899.2	897.2	897.1	1.6	1.6	160.43	6.5	54.2	78.8	75.7	3.10	25.397		
1,000.0	998.6	995.7	995.4	1.9	1.7	159.32	11.5	57.4	91.7	88.2	3.47	26.456		
1,100.0	1,097.9	1,094.6	1,094.0	2.1	1.9	158.46	17.2	61.0	106.6	102.8	3.84	27.793		
1,185.5	1,182.5	1,178.9	1,178.2	2.4	2.1	158.14	22.0	64.1	120.6	116.5	4.15	29.033		
1,200.0	1,196.9	1,193.2	1,192.4	2.4	2.1	158.11	22.8	64.6	123.1	118.9	4.21	29.244		
1,300.0	1,295.8	1,291.7	1,290.7	2.7	2.3	157.99	28.4	68.2	140.2	135.6	4.59	30.540		
1,400.0	1,394.8	1,390.3	1,389.0	3.0	2.5	157.89	34.1	71.8	157.3	152.3	4.97	31.622		
1,500.0	1,493.7	1,488.8	1,487.3	3.3	2.7	157.81	39.7	75.4	174.3	169.0	5.36	32.537		
1,600.0	1,592.6	1,587.3	1,585.7	3.6	2.9	157.74	45.3	78.9	191.4	185.7	5.74	33.320		
1,700.0	1,691.6	1,685.9	1,684.0	3.9	3.1	157.68	51.0	82.5	208.5	202.4	6.13	33.998		
1,800.0	1,790.5	1,784.4	1,782.3	4.2	3.3	157.64	56.6	86.1	225.6	219.1	6.52	34.589		
1,900.0	1,889.5	1,882.9	1,880.6	4.5	3.5	157.60	62.2	89.7	242.7	235.8	6.91	35.109		
2,000.0	1,988.4	1,981.4	1,978.9	4.8	3.7	157.56	67.8	93.3	259.7	252.4	7.30	35.570		
2,100.0	2,087.3	2,080.0	2,077.2	5.1	3.9	157.53	73.5	96.9	276.8	269.1	7.69	35.981		
2,200.0	2,186.3	2,178.5	2,175.5	5.4	4.1	157.50	79.1	100.4	293.9	285.8	8.09	36.350		
2,300.0	2,285.2	2,277.0	2,273.8	5.7	4.3	157.48	84.7	104.0	311.0	302.5	8.48	36.683		
2,400.0	2,384.2	2,375.6	2,372.1	6.0	4.6	157.46	90.4	107.6	328.1	319.2	8.87	36.985		
2,500.0	2,483.1	2,474.1	2,470.4	6.3	4.8	157.44	96.0	111.2	345.2	335.9	9.26	37.259		
2,600.0	2,582.0	2,572.6	2,568.7	6.6	5.0	157.42	101.6	114.8	362.2	352.6	9.66	37.511		
2,700.0	2,681.0	2,671.2	2,667.0	6.9	5.2	157.41	107.3	118.4	379.3	369.3	10.05	37.741		
2,800.0	2,779.9	2,769.7	2,765.3	7.2	5.4	157.39	112.9	121.9	396.4	386.0	10.44	37.953		
2,900.0	2,878.8	2,868.2	2,863.6	7.5	5.6	157.38	118.5	125.5	413.5	402.7	10.84	38.150		
3,000.0	2,977.8	2,966.7	2,961.9	7.8	5.8	157.36	124.2	129.1	430.6	419.3	11.23	38.331		
3,100.0	3,076.7	3,065.3	3,060.2	8.1	6.0	157.35	129.8	132.7	447.7	436.0	11.63	38.500		
3,200.0	3,175.7	3,163.8	3,158.5	8.4	6.2	157.34	135.4	136.3	464.7	452.7	12.02	38.657		
3,300.0	3,274.6	3,262.3	3,256.8	8.7	6.4	157.33	141.0	139.9	481.8	469.4	12.42	38.804		
3,400.0	3,373.5	3,360.9	3,355.1	9.1	6.6	157.32	146.7	143.4	498.9	486.1	12.81	38.941		
3,500.0	3,472.5	3,459.4	3,453.4	9.4	6.8	157.31	152.3	147.0	516.0	502.8	13.21	39.070		
3,600.0	3,571.4	3,557.9	3,551.7	9.7	7.0	157.31	157.9	150.6	533.1	519.5	13.60	39.191		
3,700.0	3,670.4	3,656.5	3,650.0	10.0	7.2	157.30	163.6	154.2	550.2	536.2	14.00	39.305		
3,800.0	3,769.3	3,755.0	3,748.3	10.3	7.4	157.29	169.2	157.8	567.2	552.9	14.39	39.412		
3,900.0	3,868.2	3,853.5	3,846.6	10.6	7.6	157.29	174.8	161.4	584.3	569.5	14.79	39.514		
4,000.0	3,967.2	3,952.0	3,944.9	10.9	7.9	157.28	180.5	164.9	601.4	586.2	15.18	39.610		
4,100.0	4,066.1	4,050.6	4,043.2	11.2	8.1	157.27	186.1	168.5	618.5	602.9	15.58	39.701		
4,200.0	4,165.1	4,149.1	4,141.5	11.5	8.3	157.27	191.7	172.1	635.6	619.6	15.97	39.787		
4,300.0	4,264.0	4,247.6	4,239.9	11.8	8.5	157.26	197.4	175.7	652.7	636.3	16.37	39.869		
4,400.0	4,362.9	4,346.2	4,338.2	12.1	8.7	157.26	203.0	179.3	669.7	653.0	16.77	39.947		
4,500.0	4,461.9	4,444.7	4,436.5	12.4	8.9	157.25	208.6	182.9	686.8	669.7	17.16	40.021		
4,600.0	4,560.8	4,543.2	4,534.8	12.8	9.1	157.25	214.2	186.4	703.9	686.4	17.56	40.092		
4,700.0	4,659.7	4,641.8	4,633.1	13.1	9.3	157.24	219.9	190.0	721.0	703.0	17.95	40.159		
4,800.0	4,758.7	4,740.3	4,731.4	13.4	9.5	157.24	225.5	193.6	738.1	719.7	18.35	40.224		
4,900.0	4,857.6	4,838.8	4,829.7	13.7	9.7	157.24	231.1	197.2	755.2	736.4	18.75	40.286		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1I-7H-A168 - HZ - Plan #2													Offset Site Error: 0.0 ft		
Survey Program: 0-Geolink MWD														Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
5,000.0	4,956.6	4,937.3	4,928.0	14.0	9.9	157.23	236.8	200.8	772.2	753.1	19.14	40.345			
5,100.0	5,055.5	5,035.9	5,026.3	14.3	10.1	157.23	242.4	204.4	789.3	769.8	19.54	40.401			
5,200.0	5,154.4	5,134.4	5,124.6	14.6	10.3	157.22	248.0	207.9	806.4	786.5	19.93	40.456			
5,300.0	5,253.4	5,232.9	5,222.9	14.9	10.5	157.22	253.7	211.5	823.5	803.2	20.33	40.508			
5,400.0	5,352.3	5,331.5	5,321.2	15.2	10.8	157.22	259.3	215.1	840.6	819.9	20.73	40.558			
5,500.0	5,451.3	5,430.0	5,419.5	15.5	11.0	157.22	264.9	218.7	857.7	836.5	21.12	40.606			
5,600.0	5,550.2	5,528.5	5,517.8	15.8	11.2	157.21	270.5	222.3	874.7	853.2	21.52	40.652			
5,700.0	5,649.1	5,627.1	5,616.1	16.1	11.4	157.21	276.2	225.9	891.8	869.9	21.91	40.697			
5,800.0	5,748.1	5,725.6	5,714.4	16.5	11.6	157.21	281.8	229.4	908.9	886.6	22.31	40.740			
5,900.0	5,847.0	5,824.1	5,812.7	16.8	11.8	157.20	287.4	233.0	926.0	903.3	22.71	40.781			
6,000.0	5,945.9	5,922.6	5,911.0	17.1	12.0	157.20	293.1	236.6	943.1	920.0	23.10	40.821			
6,100.0	6,044.9	6,021.2	6,009.3	17.4	12.2	157.20	298.7	240.2	960.2	936.7	23.50	40.860			
6,200.0	6,143.8	6,119.7	6,107.6	17.7	12.4	157.20	304.3	243.8	977.2	953.4	23.90	40.897			
6,300.0	6,242.8	6,218.2	6,205.9	18.0	12.6	157.19	310.0	247.4	994.3	970.0	24.29	40.933			
6,400.0	6,341.7	6,316.8	6,304.2	18.3	12.8	157.19	315.6	250.9	1,011.4	986.7	24.69	40.968			
6,500.0	6,440.6	6,415.3	6,402.5	18.6	13.0	157.19	321.2	254.5	1,028.5	1,003.4	25.08	41.002			
6,600.0	6,539.6	6,513.8	6,500.8	18.9	13.2	157.19	326.9	258.1	1,045.6	1,020.1	25.48	41.034			
6,700.0	6,638.5	6,612.4	6,599.1	19.2	13.4	157.19	332.5	261.7	1,062.7	1,036.8	25.88	41.066			
6,800.0	6,737.5	6,710.9	6,697.4	19.6	13.7	157.18	338.1	265.3	1,079.7	1,053.5	26.27	41.097			
6,900.0	6,836.4	6,809.8	6,796.1	19.9	13.9	157.20	343.4	268.9	1,096.8	1,070.2	26.66	41.141			
7,000.0	6,935.3	6,908.9	6,895.0	20.2	14.0	157.72	339.1	272.5	1,113.8	1,086.9	26.91	41.391			
7,087.6	7,022.0	6,992.2	6,977.0	20.4	14.0	158.68	324.9	275.5	1,128.9	1,101.9	27.01	41.803			
7,100.0	7,034.3	7,003.6	6,988.1	20.5	14.0	165.57	322.2	275.9	1,131.1	1,104.1	27.00	41.898			
7,150.0	7,083.8	7,050.0	7,032.6	20.6	14.0	-164.35	309.5	277.5	1,140.0	1,113.1	26.93	42.336			
7,200.0	7,133.2	7,094.1	7,074.2	20.7	13.9	-139.67	294.7	279.0	1,149.0	1,122.2	26.84	42.811			
7,250.0	7,182.3	7,138.4	7,114.9	20.8	13.9	-123.79	277.4	280.5	1,158.1	1,131.3	26.74	43.314			
7,300.0	7,230.8	7,182.0	7,153.9	20.9	13.9	-113.68	257.9	281.9	1,167.1	1,140.5	26.63	43.824			
7,350.0	7,278.4	7,225.2	7,191.2	21.0	13.8	-106.80	236.3	283.3	1,176.1	1,149.6	26.53	44.327			
7,400.0	7,325.0	7,267.8	7,226.7	21.0	13.8	-101.78	212.8	284.6	1,185.0	1,158.6	26.45	44.809			
7,450.0	7,370.3	7,310.0	7,260.5	21.1	13.7	-97.91	187.4	285.8	1,193.7	1,167.3	26.38	45.256			
7,500.0	7,414.0	7,350.0	7,291.0	21.1	13.7	-94.82	161.6	286.9	1,202.2	1,175.9	26.33	45.651			
7,550.0	7,456.1	7,393.3	7,322.4	21.2	13.7	-92.23	131.9	288.1	1,210.4	1,184.1	26.32	45.991			
7,600.0	7,496.2	7,434.4	7,350.5	21.2	13.7	-90.05	101.8	289.1	1,218.3	1,191.9	26.34	46.256			
7,650.0	7,534.2	7,475.3	7,376.6	21.2	13.7	-88.19	70.5	290.0	1,225.8	1,199.4	26.39	46.442			
7,700.0	7,569.9	7,515.9	7,400.8	21.3	13.8	-86.57	37.9	290.9	1,232.8	1,206.3	26.48	46.554			
7,750.0	7,603.1	7,556.2	7,423.0	21.4	13.8	-85.17	4.2	291.7	1,239.4	1,212.8	26.63	46.540			
7,800.0	7,633.7	7,600.0	7,444.8	21.4	13.9	-83.93	-33.7	292.5	1,245.5	1,218.7	26.82	46.439			
7,850.0	7,661.5	7,636.4	7,461.2	21.5	14.1	-82.89	-66.2	293.1	1,251.1	1,224.0	27.05	46.242			
7,900.0	7,686.3	7,676.2	7,477.2	21.6	14.2	-81.98	-102.7	293.7	1,256.0	1,228.7	27.34	45.937			
7,950.0	7,708.1	7,715.9	7,491.2	21.8	14.4	-81.21	-139.9	294.2	1,260.4	1,232.7	27.68	45.532			
8,000.0	7,726.8	7,755.5	7,503.0	22.0	14.6	-80.57	-177.7	294.6	1,264.1	1,236.1	28.07	45.030			
8,050.0	7,742.1	7,800.0	7,513.7	22.2	14.9	-80.04	-220.8	295.0	1,267.3	1,238.7	28.55	44.384			
8,100.0	7,754.2	7,834.5	7,520.2	22.4	15.1	-79.65	-254.7	295.3	1,269.7	1,240.6	29.03	43.731			
8,150.0	7,762.9	7,873.9	7,525.6	22.6	15.4	-79.37	-293.7	295.5	1,271.4	1,241.8	29.60	42.960			
8,200.0	7,768.2	7,913.2	7,528.9	22.9	15.7	-79.19	-332.9	295.6	1,272.5	1,242.3	30.21	42.123			
8,251.3	7,770.0	7,953.8	7,530.0	23.2	16.1	-79.13	-373.4	295.6	1,272.9	1,242.0	30.89	41.206			
8,300.0	7,770.0	8,002.5	7,530.0	23.5	16.5	-79.13	-422.1	295.6	1,272.9	1,241.1	31.81	40.012			
8,400.0	7,770.0	8,102.5	7,530.0	24.2	17.6	-79.13	-522.1	295.6	1,272.9	1,239.0	33.89	37.562			
8,500.0	7,770.0	8,202.5	7,530.0	25.1	18.7	-79.13	-622.1	295.6	1,272.9	1,236.7	36.17	35.190			
8,600.0	7,770.0	8,302.5	7,530.0	26.0	19.9	-79.13	-722.1	295.6	1,272.9	1,234.2	38.63	32.951			
8,700.0	7,770.0	8,402.5	7,530.0	27.0	21.2	-79.13	-822.1	295.6	1,272.9	1,231.6	41.23	30.874			
8,800.0	7,770.0	8,502.5	7,530.0	28.1	22.6	-79.13	-922.1	295.6	1,272.9	1,228.9	43.94	28.966			

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 11-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,900.0	7,770.0	8,602.5	7,530.0	29.2	24.0	-79.13	-1,022.1	295.6	1,272.9	1,226.1	46.76	27.224		
9,000.0	7,770.0	8,702.5	7,530.0	30.5	25.5	-79.13	-1,122.1	295.6	1,272.9	1,223.2	49.65	25.638		
9,100.0	7,770.0	8,802.5	7,530.0	31.7	26.9	-79.13	-1,222.1	295.6	1,272.9	1,220.3	52.61	24.196		
9,200.0	7,770.0	8,902.5	7,530.0	33.0	28.5	-79.13	-1,322.1	295.6	1,272.9	1,217.3	55.62	22.884		
9,300.0	7,770.0	9,002.5	7,530.0	34.4	30.0	-79.13	-1,422.1	295.6	1,272.9	1,214.2	58.68	21.690		
9,400.0	7,770.0	9,102.5	7,530.0	35.7	31.6	-79.13	-1,522.1	295.6	1,272.9	1,211.1	61.79	20.601		
9,500.0	7,770.0	9,202.5	7,530.0	37.1	33.2	-79.13	-1,622.1	295.6	1,272.9	1,208.0	64.92	19.605		
9,600.0	7,770.0	9,302.5	7,530.0	38.6	34.8	-79.13	-1,722.1	295.6	1,272.9	1,204.8	68.09	18.694		
9,700.0	7,770.0	9,402.5	7,530.0	40.0	36.4	-79.13	-1,822.1	295.6	1,272.9	1,201.6	71.28	17.856		
9,800.0	7,770.0	9,502.5	7,530.0	41.5	38.0	-79.13	-1,922.1	295.6	1,272.9	1,198.4	74.50	17.085		
9,900.0	7,770.0	9,602.5	7,530.0	43.0	39.7	-79.13	-2,022.1	295.6	1,272.9	1,195.1	77.74	16.374		
10,000.0	7,770.0	9,702.5	7,530.0	44.6	41.3	-79.13	-2,122.1	295.6	1,272.9	1,191.9	80.99	15.717		
10,100.0	7,770.0	9,802.5	7,530.0	46.1	43.0	-79.13	-2,222.1	295.6	1,272.9	1,188.6	84.26	15.107		
10,200.0	7,770.0	9,902.5	7,530.0	47.7	44.6	-79.13	-2,322.1	295.6	1,272.9	1,185.3	87.54	14.541		
10,300.0	7,770.0	10,002.5	7,530.0	49.2	46.3	-79.13	-2,422.1	295.6	1,272.9	1,182.0	90.83	14.013		
10,400.0	7,770.0	10,102.5	7,530.0	50.8	48.0	-79.13	-2,522.1	295.6	1,272.9	1,178.7	94.14	13.521		
10,500.0	7,770.0	10,202.5	7,530.0	52.4	49.7	-79.13	-2,622.1	295.6	1,272.9	1,175.4	97.45	13.062		
10,600.0	7,770.0	10,302.5	7,530.0	54.0	51.3	-79.13	-2,722.1	295.6	1,272.9	1,172.1	100.78	12.631		
10,700.0	7,770.0	10,402.5	7,530.0	55.6	53.0	-79.13	-2,822.1	295.6	1,272.9	1,168.8	104.11	12.227		
10,800.0	7,770.0	10,502.5	7,530.0	57.2	54.7	-79.13	-2,922.1	295.6	1,272.9	1,165.4	107.45	11.847		
10,900.0	7,770.0	10,602.5	7,530.0	58.9	56.4	-79.13	-3,022.1	295.6	1,272.9	1,162.1	110.79	11.489		
11,000.0	7,770.0	10,702.5	7,530.0	60.5	58.1	-79.13	-3,122.1	295.6	1,272.9	1,158.7	114.14	11.152		
11,100.0	7,770.0	10,802.5	7,530.0	62.2	59.8	-79.13	-3,222.1	295.6	1,272.9	1,155.4	117.50	10.833		
11,200.0	7,770.0	10,902.5	7,530.0	63.8	61.5	-79.13	-3,322.1	295.6	1,272.9	1,152.0	120.86	10.532		
11,300.0	7,770.0	11,002.5	7,530.0	65.5	63.3	-79.13	-3,422.1	295.6	1,272.9	1,148.7	124.23	10.246		
11,400.0	7,770.0	11,102.5	7,530.0	67.1	65.0	-79.13	-3,522.1	295.6	1,272.9	1,145.3	127.60	9.976		
11,500.0	7,770.0	11,202.5	7,530.0	68.8	66.7	-79.13	-3,622.1	295.6	1,272.9	1,141.9	130.97	9.719		
11,600.0	7,770.0	11,302.5	7,530.0	70.4	68.4	-79.13	-3,722.1	295.6	1,272.9	1,138.5	134.35	9.474		
11,700.0	7,770.0	11,402.5	7,530.0	72.1	70.1	-79.13	-3,822.1	295.6	1,272.9	1,135.2	137.73	9.242		
11,800.0	7,770.0	11,502.5	7,530.0	73.8	71.8	-79.13	-3,922.1	295.6	1,272.9	1,131.8	141.12	9.020		
11,900.0	7,770.0	11,602.5	7,530.0	75.5	73.6	-79.13	-4,022.1	295.6	1,272.9	1,128.4	144.50	8.809		
12,000.0	7,770.0	11,702.5	7,530.0	77.1	75.3	-79.13	-4,122.1	295.6	1,272.9	1,125.0	147.89	8.607		
12,100.0	7,770.0	11,802.5	7,530.0	78.8	77.0	-79.13	-4,222.1	295.6	1,272.9	1,121.6	151.29	8.414		
12,200.0	7,770.0	11,902.5	7,530.0	80.5	78.7	-79.13	-4,322.1	295.6	1,272.9	1,118.2	154.68	8.229		
12,300.0	7,770.0	12,002.5	7,530.0	82.2	80.5	-79.13	-4,422.1	295.6	1,272.9	1,114.8	158.08	8.052		
12,400.0	7,770.0	12,102.5	7,530.0	83.9	82.2	-79.13	-4,522.1	295.6	1,272.9	1,111.4	161.48	7.883		
12,500.0	7,770.0	12,202.5	7,530.0	85.6	83.9	-79.13	-4,622.1	295.6	1,272.9	1,108.0	164.88	7.720		
12,600.0	7,770.0	12,302.5	7,530.0	87.3	85.7	-79.13	-4,722.1	295.6	1,272.9	1,104.6	168.28	7.564		
12,700.0	7,770.0	12,402.5	7,530.0	89.0	87.4	-79.13	-4,822.1	295.6	1,272.9	1,101.2	171.69	7.414		
12,800.0	7,770.0	12,502.5	7,530.0	90.7	89.1	-79.13	-4,922.1	295.6	1,272.9	1,097.8	175.09	7.270		
12,900.0	7,770.0	12,602.5	7,530.0	92.4	90.9	-79.13	-5,022.1	295.6	1,272.9	1,094.4	178.50	7.131		
13,000.0	7,770.0	12,702.5	7,530.0	94.1	92.6	-79.13	-5,122.1	295.6	1,272.9	1,091.0	181.91	6.997		
13,100.0	7,770.0	12,802.5	7,530.0	95.8	94.3	-79.13	-5,222.1	295.6	1,272.9	1,087.6	185.32	6.869		
13,200.0	7,770.0	12,902.5	7,530.0	97.5	96.1	-79.13	-5,322.1	295.6	1,272.9	1,084.2	188.73	6.744		
13,300.0	7,770.0	13,002.5	7,530.0	99.2	97.8	-79.13	-5,422.1	295.6	1,272.9	1,080.7	192.15	6.625		
13,400.0	7,770.0	13,102.5	7,530.0	101.0	99.5	-79.13	-5,522.1	295.6	1,272.9	1,077.3	195.56	6.509		
13,500.0	7,770.0	13,202.5	7,530.0	102.7	101.3	-79.13	-5,622.1	295.6	1,272.9	1,073.9	198.98	6.397		
13,600.0	7,770.0	13,302.5	7,530.0	104.4	103.0	-79.13	-5,722.1	295.6	1,272.9	1,070.5	202.39	6.289		
13,700.0	7,770.0	13,402.5	7,530.0	106.1	104.7	-79.13	-5,822.1	295.6	1,272.9	1,067.1	205.81	6.185		
13,800.0	7,770.0	13,502.5	7,530.0	107.8	106.5	-79.13	-5,922.1	295.6	1,272.9	1,063.7	209.23	6.084		
13,900.0	7,770.0	13,602.5	7,530.0	109.5	108.2	-79.13	-6,022.1	295.6	1,272.9	1,060.2	212.65	5.986		
14,000.0	7,770.0	13,702.5	7,530.0	111.3	110.0	-79.13	-6,122.1	295.6	1,272.9	1,056.8	216.07	5.891		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 11-7H-A168 - HZ - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
14,100.0	7,770.0	13,802.5	7,530.0	113.0	111.7	-79.13	-6,222.1	295.6	1,272.9	1,053.4	219.49	5.799		
14,200.0	7,770.0	13,902.5	7,530.0	114.7	113.4	-79.13	-6,322.1	295.6	1,272.9	1,050.0	222.91	5.710		
14,300.0	7,770.0	14,002.5	7,530.0	116.4	115.2	-79.13	-6,422.1	295.6	1,272.9	1,046.6	226.33	5.624		
14,400.0	7,770.0	14,102.5	7,530.0	118.2	116.9	-79.13	-6,522.1	295.6	1,272.9	1,043.1	229.76	5.540		
14,500.0	7,770.0	14,202.5	7,530.0	119.9	118.7	-79.13	-6,622.1	295.6	1,272.9	1,039.7	233.18	5.459		
14,600.0	7,770.0	14,302.5	7,530.0	121.6	120.4	-79.13	-6,722.1	295.6	1,272.9	1,036.3	236.60	5.380		
14,700.0	7,770.0	14,402.5	7,530.0	123.3	122.2	-79.13	-6,822.1	295.6	1,272.9	1,032.9	240.03	5.303		
14,800.0	7,770.0	14,502.5	7,530.0	125.1	123.9	-79.13	-6,922.1	295.6	1,272.9	1,029.4	243.45	5.228		
14,900.0	7,770.0	14,602.5	7,530.0	126.8	125.6	-79.13	-7,022.1	295.6	1,272.9	1,026.0	246.88	5.156		
15,000.0	7,770.0	14,702.5	7,530.0	128.5	127.4	-79.13	-7,122.1	295.6	1,272.9	1,022.6	250.31	5.085		
15,100.0	7,770.0	14,802.5	7,530.0	130.2	129.1	-79.13	-7,222.1	295.6	1,272.9	1,019.2	253.73	5.017		
15,200.0	7,770.0	14,902.5	7,530.0	132.0	130.9	-79.13	-7,322.1	295.6	1,272.9	1,015.7	257.16	4.950		
15,300.0	7,770.0	15,002.5	7,530.0	133.7	132.6	-79.13	-7,422.1	295.6	1,272.9	1,012.3	260.59	4.885		
15,400.0	7,770.0	15,102.5	7,530.0	135.4	134.4	-79.13	-7,522.1	295.6	1,272.9	1,008.9	264.02	4.821		
15,500.0	7,770.0	15,202.5	7,530.0	137.2	136.1	-79.13	-7,622.1	295.6	1,272.9	1,005.4	267.45	4.759		
15,600.0	7,770.0	15,302.5	7,530.0	138.9	137.9	-79.13	-7,722.1	295.6	1,272.9	1,002.0	270.88	4.699		
15,700.0	7,770.0	15,402.5	7,530.0	140.6	139.6	-79.13	-7,822.1	295.6	1,272.9	998.6	274.31	4.640		
15,800.0	7,770.0	15,502.5	7,530.0	142.4	141.3	-79.13	-7,922.1	295.6	1,272.9	995.2	277.74	4.583		
15,900.0	7,770.0	15,602.5	7,530.0	144.1	143.1	-79.13	-8,022.1	295.6	1,272.9	991.7	281.17	4.527		
16,000.0	7,770.0	15,702.5	7,530.0	145.8	144.8	-79.13	-8,122.1	295.6	1,272.9	988.3	284.60	4.473		
16,100.0	7,770.0	15,802.5	7,530.0	147.6	146.6	-79.13	-8,222.1	295.6	1,272.9	984.9	288.03	4.419		
16,200.0	7,770.0	15,902.5	7,530.0	149.3	148.3	-79.13	-8,322.1	295.6	1,272.9	981.4	291.46	4.367		
16,300.0	7,770.0	16,002.5	7,530.0	151.0	150.1	-79.13	-8,422.1	295.6	1,272.9	978.0	294.90	4.316		
16,400.0	7,770.0	16,102.5	7,530.0	152.8	151.8	-79.13	-8,522.1	295.6	1,272.9	974.6	298.33	4.267		
16,500.0	7,770.0	16,202.5	7,530.0	154.5	153.6	-79.13	-8,622.1	295.6	1,272.9	971.1	301.76	4.218		
16,600.0	7,770.0	16,302.5	7,530.0	156.3	155.3	-79.13	-8,722.1	295.6	1,272.9	967.7	305.19	4.171		
16,700.0	7,770.0	16,402.5	7,530.0	158.0	157.1	-79.13	-8,822.1	295.6	1,272.9	964.3	308.63	4.124		
16,800.0	7,770.0	16,502.5	7,530.0	159.7	158.8	-79.13	-8,922.1	295.6	1,272.9	960.8	312.06	4.079		
16,900.0	7,770.0	16,602.5	7,530.0	161.5	160.6	-79.13	-9,022.1	295.6	1,272.9	957.4	315.50	4.035		
17,000.0	7,770.0	16,702.5	7,530.0	163.2	162.3	-79.13	-9,122.1	295.6	1,272.9	954.0	318.93	3.991		
17,100.0	7,770.0	16,802.5	7,530.0	164.9	164.1	-79.13	-9,222.1	295.6	1,272.9	950.5	322.36	3.949		
17,200.0	7,770.0	16,902.5	7,530.0	166.7	165.8	-79.13	-9,322.1	295.6	1,272.9	947.1	325.80	3.907		
17,300.0	7,770.0	17,002.5	7,530.0	168.4	167.5	-79.13	-9,422.1	295.6	1,272.9	943.7	329.23	3.866		
17,400.0	7,770.0	17,102.5	7,530.0	170.2	169.3	-79.13	-9,522.1	295.6	1,272.9	940.2	332.67	3.826		
17,500.0	7,770.0	17,202.5	7,530.0	171.9	171.0	-79.13	-9,622.1	295.6	1,272.9	936.8	336.10	3.787		
17,600.0	7,770.0	17,302.5	7,530.0	173.6	172.8	-79.13	-9,722.1	295.6	1,272.9	933.4	339.54	3.749		
17,701.3	7,770.0	17,403.8	7,530.0	175.4	174.6	-79.13	-9,823.4	295.6	1,272.9	929.9	343.02	3.711 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 33-7 (EXISTING) - ENCANA WELL - SU														Offset Site Error:	0.0 ft
Survey Program: 59-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		
9,500.0	7,770.0	8,028.3	7,757.0	37.1	34.9	90.42	-3,009.9	-1,632.8	1,544.7	1,486.4	58.31	26.490			
9,600.0	7,770.0	8,028.1	7,756.8	38.6	34.9	90.41	-3,009.9	-1,632.8	1,455.6	1,395.6	59.92	24.291			
9,700.0	7,770.0	8,027.9	7,756.6	40.0	34.9	90.39	-3,009.9	-1,632.8	1,367.9	1,306.3	61.54	22.227			
9,800.0	7,770.0	8,027.8	7,756.4	41.5	34.9	90.37	-3,009.9	-1,632.8	1,282.0	1,218.8	63.18	20.293			
9,900.0	7,770.0	8,027.6	7,756.3	43.0	34.9	90.36	-3,009.9	-1,632.8	1,198.3	1,133.5	64.82	18.487			
10,000.0	7,770.0	8,027.4	7,756.1	44.6	34.9	90.34	-3,009.9	-1,632.8	1,117.3	1,050.9	66.47	16.809			
10,100.0	7,770.0	8,027.2	7,755.9	46.1	34.9	90.33	-3,009.9	-1,632.8	1,039.7	971.5	68.13	15.260			
10,200.0	7,770.0	8,027.0	7,755.7	47.7	34.9	90.31	-3,009.9	-1,632.8	966.1	896.3	69.80	13.841			
10,300.0	7,770.0	8,026.8	7,755.5	49.2	34.9	90.30	-3,009.9	-1,632.8	897.6	826.2	71.47	12.559			
10,400.0	7,770.0	8,026.7	7,755.3	50.8	34.9	90.28	-3,009.9	-1,632.8	835.6	762.4	73.15	11.423			
10,500.0	7,770.0	8,026.5	7,755.2	52.4	34.9	90.27	-3,009.9	-1,632.8	781.4	706.6	74.84	10.442			
10,600.0	7,770.0	8,026.3	7,755.0	54.0	34.9	90.25	-3,009.9	-1,632.8	736.9	660.4	76.53	9.630			
10,700.0	7,770.0	8,026.1	7,754.8	55.6	34.9	90.24	-3,009.9	-1,632.8	703.9	625.7	78.22	8.999			
10,800.0	7,770.0	8,026.0	7,754.7	57.2	34.9	90.22	-3,009.9	-1,632.8	684.1	604.2	79.92	8.560			
10,887.8	7,770.0	8,025.8	7,754.5	58.7	34.9	90.21	-3,009.9	-1,632.8	678.4	597.0	81.41	8.333 CC			
10,900.0	7,770.0	8,025.8	7,754.5	58.9	34.9	90.21	-3,009.9	-1,632.8	678.5	596.9	81.62	8.314 ES			
11,000.0	7,770.0	8,025.6	7,754.3	60.5	34.9	90.20	-3,009.9	-1,632.8	687.6	604.3	83.32	8.253 SF			
11,100.0	7,770.0	8,025.5	7,754.2	62.2	34.9	90.18	-3,009.9	-1,632.8	710.8	625.8	85.03	8.360			
11,200.0	7,770.0	8,025.3	7,754.0	63.8	34.9	90.17	-3,009.9	-1,632.8	746.8	660.1	86.74	8.610			
11,300.0	7,770.0	8,025.1	7,753.8	65.5	34.9	90.15	-3,009.9	-1,632.8	793.8	705.4	88.45	8.975			
11,400.0	7,770.0	8,025.0	7,753.7	67.1	34.9	90.14	-3,009.9	-1,632.8	850.1	759.9	90.16	9.428			
11,500.0	7,770.0	8,024.8	7,753.5	68.8	34.9	90.13	-3,009.9	-1,632.8	913.8	821.9	91.88	9.946			
11,600.0	7,770.0	8,024.7	7,753.4	70.4	34.9	90.12	-3,009.9	-1,632.8	983.6	890.0	93.60	10.509			
11,700.0	7,770.0	8,024.5	7,753.2	72.1	34.9	90.10	-3,009.9	-1,632.8	1,058.3	962.9	95.32	11.103			
11,800.0	7,770.0	8,024.4	7,753.1	73.8	34.9	90.09	-3,009.9	-1,632.8	1,136.8	1,039.8	97.04	11.715			
11,900.0	7,770.0	8,024.2	7,752.9	75.5	34.9	90.08	-3,009.9	-1,632.8	1,218.5	1,119.8	98.76	12.338			
12,000.0	7,770.0	8,024.1	7,752.8	77.1	34.9	90.06	-3,009.9	-1,632.8	1,302.8	1,202.3	100.49	12.965			
12,100.0	7,770.0	8,023.9	7,752.6	78.8	34.9	90.05	-3,009.9	-1,632.8	1,389.1	1,286.9	102.21	13.591			
12,200.0	7,770.0	8,023.8	7,752.5	80.5	34.9	90.04	-3,009.9	-1,632.8	1,477.2	1,373.3	103.94	14.212			

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 41-7 (EXISTING) - ENCANA WELL - N												Offset Site Error:	0.0 ft
Survey Program: 8370-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-133.99	-188.3	-195.1	271.2				
100.0	100.0	97.0	97.0	0.2	0.2	-133.99	-188.3	-195.1	271.1	270.8	0.32	843.789	
200.0	200.0	197.0	197.0	0.3	0.3	-133.99	-188.3	-195.1	271.1	270.5	0.67	404.447	
300.0	300.0	297.0	297.0	0.5	0.5	-133.99	-188.3	-195.1	271.1	270.1	1.02	265.965	
350.0	350.0	347.0	347.0	0.6	0.6	-133.99	-188.3	-195.1	271.1	269.9	1.19	227.088	
400.0	400.0	397.0	397.0	0.7	0.7	-65.88	-188.3	-195.1	271.1	269.7	1.37	198.057	
500.0	500.0	497.0	497.0	0.9	0.9	-66.23	-188.3	-195.1	270.3	268.6	1.72	157.277	
600.0	599.9	596.9	596.9	1.0	1.0	-66.92	-188.3	-195.1	269.0	266.9	2.07	129.726	
700.0	699.8	696.8	696.8	1.2	1.2	-67.97	-188.3	-195.1	266.9	264.5	2.43	109.636	
800.0	799.5	796.5	796.5	1.4	1.4	-69.39	-188.3	-195.1	264.4	261.6	2.81	94.187	
900.0	899.2	896.2	896.2	1.6	1.6	-71.20	-188.3	-195.1	261.5	258.3	3.19	81.851	
1,000.0	998.6	995.6	995.6	1.9	1.7	-73.42	-188.3	-195.1	258.3	254.7	3.60	71.742	
1,100.0	1,097.9	1,094.9	1,094.9	2.1	1.9	-76.05	-188.3	-195.1	255.0	251.0	4.03	63.318	
1,185.5	1,182.5	1,179.5	1,179.5	2.4	2.1	-78.65	-188.3	-195.1	252.4	248.0	4.41	57.206	
1,200.0	1,196.9	1,193.9	1,193.9	2.4	2.1	-79.12	-188.3	-195.1	252.0	247.5	4.48	56.269	
1,300.0	1,295.8	1,292.8	1,292.8	2.7	2.3	-82.36	-188.3	-195.1	249.7	244.7	4.94	50.544	
1,400.0	1,394.8	1,391.8	1,391.8	3.0	2.4	-85.65	-188.3	-195.1	248.1	242.7	5.41	45.902	
1,500.0	1,493.7	1,490.7	1,490.7	3.3	2.6	-88.97	-188.3	-195.1	247.4	241.6	5.87	42.126	
1,530.8	1,524.2	1,521.2	1,521.2	3.4	2.7	-90.00	-188.3	-195.1	247.4	241.4	6.02	41.109 CC	
1,600.0	1,592.6	1,589.6	1,589.6	3.6	2.8	-92.30	-188.3	-195.1	247.6	241.3	6.34	39.048 ES	
1,700.0	1,691.6	1,688.6	1,688.6	3.9	2.9	-95.62	-188.3	-195.1	248.6	241.8	6.80	36.536	
1,800.0	1,790.5	1,787.5	1,787.5	4.2	3.1	-98.89	-188.3	-195.1	250.5	243.2	7.26	34.489	
1,900.0	1,889.5	1,886.5	1,886.5	4.5	3.3	-102.11	-188.3	-195.1	253.1	245.4	7.71	32.824	
2,000.0	1,988.4	1,985.4	1,985.4	4.8	3.5	-105.25	-188.3	-195.1	256.6	248.5	8.15	31.475	
2,100.0	2,087.3	2,084.3	2,084.3	5.1	3.6	-108.30	-188.3	-195.1	260.8	252.3	8.58	30.389	
2,200.0	2,186.3	2,183.3	2,183.3	5.4	3.8	-111.25	-188.3	-195.1	265.8	256.8	9.00	29.523	
2,300.0	2,285.2	2,282.2	2,282.2	5.7	4.0	-114.08	-188.3	-195.1	271.5	262.1	9.41	28.839	
2,400.0	2,384.2	2,381.2	2,381.2	6.0	4.2	-116.80	-188.3	-195.1	277.8	268.0	9.81	28.309	
2,500.0	2,483.1	2,480.1	2,480.1	6.3	4.3	-119.39	-188.3	-195.1	284.7	274.5	10.20	27.906	
2,600.0	2,582.0	2,579.0	2,579.0	6.6	4.5	-121.85	-188.3	-195.1	292.1	281.5	10.58	27.610	
2,700.0	2,681.0	2,678.0	2,678.0	6.9	4.7	-124.19	-188.3	-195.1	300.1	289.2	10.95	27.403	
2,800.0	2,779.9	2,776.9	2,776.9	7.2	4.8	-126.41	-188.3	-195.1	308.6	297.2	11.32	27.270	
2,900.0	2,878.8	2,875.8	2,875.8	7.5	5.0	-128.51	-188.3	-195.1	317.5	305.8	11.67	27.199	
3,000.0	2,977.8	2,974.8	2,974.8	7.8	5.2	-130.49	-188.3	-195.1	326.8	314.7	12.02	27.180	
3,100.0	3,076.7	3,073.7	3,073.7	8.1	5.4	-132.36	-188.3	-195.1	336.4	324.1	12.37	27.203	
3,200.0	3,175.7	3,172.7	3,172.7	8.4	5.5	-134.13	-188.3	-195.1	346.4	333.7	12.71	27.261	
3,300.0	3,274.6	3,271.6	3,271.6	8.7	5.7	-135.79	-188.3	-195.1	356.8	343.7	13.05	27.348	
3,400.0	3,373.5	3,370.5	3,370.5	9.1	5.9	-137.37	-188.3	-195.1	367.4	354.0	13.38	27.458	
3,500.0	3,472.5	3,469.5	3,469.5	9.4	6.1	-138.85	-188.3	-195.1	378.2	364.5	13.71	27.587	
3,600.0	3,571.4	3,568.4	3,568.4	9.7	6.2	-140.25	-188.3	-195.1	389.4	375.3	14.04	27.731	
3,700.0	3,670.4	3,667.4	3,667.4	10.0	6.4	-141.57	-188.3	-195.1	400.7	386.3	14.37	27.887	
3,800.0	3,769.3	3,766.3	3,766.3	10.3	6.6	-142.83	-188.3	-195.1	412.2	397.5	14.69	28.053	
3,900.0	3,868.2	3,865.2	3,865.2	10.6	6.7	-144.01	-188.3	-195.1	423.9	408.9	15.02	28.226	
4,000.0	3,967.2	3,964.2	3,964.2	10.9	6.9	-145.13	-188.3	-195.1	435.8	420.5	15.34	28.403	
4,100.0	4,066.1	4,063.1	4,063.1	11.2	7.1	-146.19	-188.3	-195.1	447.8	432.2	15.67	28.585	
4,200.0	4,165.1	4,162.1	4,162.1	11.5	7.3	-147.19	-188.3	-195.1	460.0	444.0	15.99	28.769	
4,300.0	4,264.0	4,261.0	4,261.0	11.8	7.4	-148.14	-188.3	-195.1	472.3	456.0	16.31	28.954	
4,400.0	4,362.9	4,359.9	4,359.9	12.1	7.6	-149.05	-188.3	-195.1	484.8	468.1	16.64	29.139	
4,500.0	4,461.9	4,458.9	4,458.9	12.4	7.8	-149.90	-188.3	-195.1	497.3	480.4	16.96	29.324	
4,600.0	4,560.8	4,557.8	4,557.8	12.8	8.0	-150.72	-188.3	-195.1	510.0	492.7	17.28	29.508	
4,700.0	4,659.7	4,656.7	4,656.7	13.1	8.1	-151.50	-188.3	-195.1	522.7	505.1	17.61	29.690	
4,800.0	4,758.7	4,755.7	4,755.7	13.4	8.3	-152.24	-188.3	-195.1	535.6	517.6	17.93	29.871	

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 41-7 (EXISTING) - ENCANA WELL - N													Offset Site Error:	0.0 ft
Survey Program: 8370-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)	
4,900.0	4,857.6	4,854.6	4,854.6	13.7	8.5	-152.94	-188.3	-195.1	548.5	530.3	18.25	30.049		
5,000.0	4,956.6	4,953.6	4,953.6	14.0	8.6	-153.62	-188.3	-195.1	561.5	542.9	18.58	30.224		
5,100.0	5,055.5	5,052.5	5,052.5	14.3	8.8	-154.26	-188.3	-195.1	574.6	555.7	18.90	30.397		
5,200.0	5,154.4	5,151.4	5,151.4	14.6	9.0	-154.87	-188.3	-195.1	587.7	568.5	19.23	30.566		
5,300.0	5,253.4	5,250.4	5,250.4	14.9	9.2	-155.46	-188.3	-195.1	601.0	581.4	19.55	30.733		
5,400.0	5,352.3	5,349.3	5,349.3	15.2	9.3	-156.02	-188.3	-195.1	614.2	594.3	19.88	30.897		
5,500.0	5,451.3	5,448.3	5,448.3	15.5	9.5	-156.56	-188.3	-195.1	627.6	607.3	20.21	31.057		
5,600.0	5,550.2	5,547.2	5,547.2	15.8	9.7	-157.08	-188.3	-195.1	640.9	620.4	20.53	31.214		
5,700.0	5,649.1	5,646.1	5,646.1	16.1	9.9	-157.57	-188.3	-195.1	654.4	633.5	20.86	31.368		
5,800.0	5,748.1	5,745.1	5,745.1	16.5	10.0	-158.05	-188.3	-195.1	667.8	646.6	21.19	31.519		
5,900.0	5,847.0	5,844.0	5,844.0	16.8	10.2	-158.50	-188.3	-195.1	681.4	659.8	21.52	31.666		
6,000.0	5,945.9	5,942.9	5,942.9	17.1	10.4	-158.94	-188.3	-195.1	694.9	673.1	21.85	31.810		
6,100.0	6,044.9	6,041.9	6,041.9	17.4	10.5	-159.36	-188.3	-195.1	708.5	686.3	22.17	31.951		
6,200.0	6,143.8	6,140.8	6,140.8	17.7	10.7	-159.77	-188.3	-195.1	722.1	699.6	22.50	32.089		
6,300.0	6,242.8	6,239.8	6,239.8	18.0	10.9	-160.16	-188.3	-195.1	735.8	713.0	22.83	32.224		
6,400.0	6,341.7	6,338.7	6,338.7	18.3	11.1	-160.54	-188.3	-195.1	749.5	726.3	23.16	32.356		
6,500.0	6,440.6	6,437.6	6,437.6	18.6	11.2	-160.90	-188.3	-195.1	763.2	739.7	23.50	32.484		
6,600.0	6,539.6	6,536.6	6,536.6	18.9	11.4	-161.25	-188.3	-195.1	777.0	753.2	23.83	32.610		
6,700.0	6,638.5	6,635.5	6,635.5	19.2	11.6	-161.59	-188.3	-195.1	790.8	766.6	24.16	32.733		
6,800.0	6,737.5	6,734.5	6,734.5	19.6	11.8	-161.91	-188.3	-195.1	804.6	780.1	24.49	32.854		
6,900.0	6,836.4	6,833.4	6,833.4	19.9	11.9	-162.23	-188.3	-195.1	818.4	793.6	24.82	32.971		
7,000.0	6,935.3	6,932.3	6,932.3	20.2	12.1	-162.53	-188.3	-195.1	832.3	807.1	25.16	33.086		
7,087.6	7,022.0	7,019.0	7,019.0	20.4	12.3	-162.79	-188.3	-195.1	844.5	819.0	25.45	33.185		
7,100.0	7,034.3	7,031.3	7,031.3	20.5	12.3	-156.19	-188.3	-195.1	846.1	820.6	25.51	33.166		
7,150.0	7,083.8	7,080.8	7,080.8	20.6	12.4	-127.42	-188.3	-195.1	851.4	825.7	25.74	33.080		
7,200.0	7,133.2	7,130.2	7,130.2	20.7	12.4	-104.31	-188.3	-195.1	854.6	828.7	25.91	32.989		
7,250.0	7,182.3	7,179.3	7,179.3	20.8	12.5	-90.29	-188.3	-195.1	855.7	829.7	26.02	32.891		
7,300.0	7,230.8	7,227.8	7,227.8	20.9	12.6	-82.30	-188.3	-195.1	854.8	828.7	26.08	32.778		
7,350.0	7,278.4	7,275.4	7,275.4	21.0	12.7	-77.77	-188.3	-195.1	851.9	825.8	26.10	32.638		
7,400.0	7,325.0	7,322.0	7,322.0	21.0	12.8	-75.34	-188.3	-195.1	847.4	821.3	26.11	32.458		
7,450.0	7,370.3	7,367.3	7,367.3	21.1	12.9	-74.27	-188.3	-195.1	841.2	815.1	26.11	32.225		
7,500.0	7,414.0	7,411.0	7,411.0	21.1	12.9	-74.15	-188.3	-195.1	833.8	807.7	26.12	31.927		
7,550.0	7,456.1	7,453.1	7,453.1	21.2	13.0	-74.72	-188.3	-195.1	825.3	799.1	26.15	31.558		
7,600.0	7,496.2	7,493.2	7,493.2	21.2	13.1	-75.81	-188.3	-195.1	816.0	789.7	26.22	31.118		
7,650.0	7,534.2	7,531.2	7,531.2	21.2	13.1	-77.28	-188.3	-195.1	806.2	779.9	26.33	30.617		
7,700.0	7,569.9	7,566.9	7,566.9	21.3	13.2	-79.02	-188.3	-195.1	796.3	769.8	26.48	30.073		
7,750.0	7,603.1	7,600.1	7,600.1	21.4	13.3	-80.91	-188.3	-195.1	786.7	760.1	26.66	29.511		
7,800.0	7,633.7	7,630.7	7,630.7	21.4	13.3	-82.86	-188.3	-195.1	777.7	750.9	26.86	28.956		
7,850.0	7,661.5	7,658.5	7,658.5	21.5	13.4	-84.76	-188.3	-195.1	769.8	742.7	27.08	28.432		
7,900.0	7,686.3	7,683.3	7,683.3	21.6	13.4	-86.54	-188.3	-195.1	763.3	736.0	27.30	27.957		
7,950.0	7,708.1	7,705.1	7,705.1	21.8	13.4	-88.10	-188.3	-195.1	758.6	731.0	27.54	27.543		
8,000.0	7,726.8	7,723.8	7,723.8	22.0	13.5	-89.38	-188.3	-195.1	755.9	728.1	27.80	27.195		
8,030.2	7,736.5	7,733.5	7,733.5	22.1	13.5	-90.00	-188.3	-195.1	755.5	727.5	27.97	27.013		
8,050.0	7,742.1	7,739.1	7,739.1	22.2	13.5	-90.33	-188.3	-195.1	755.7	727.6	28.08	26.916		
8,100.0	7,754.2	7,751.2	7,751.2	22.4	13.5	-90.89	-188.3	-195.1	758.0	729.6	28.39	26.704		
8,150.0	7,762.9	7,759.9	7,759.9	22.6	13.5	-91.04	-188.3	-195.1	763.0	734.3	28.73	26.563		
8,200.0	7,768.2	7,765.2	7,765.2	22.9	13.6	-90.76	-188.3	-195.1	770.8	741.7	29.09	26.496 SF		
8,251.3	7,770.0	7,767.0	7,767.0	23.2	13.6	-90.00	-188.3	-195.1	781.6	752.1	29.48	26.516		
8,300.0	7,770.0	7,767.0	7,767.0	23.5	13.6	-90.00	-188.3	-195.1	794.5	764.6	29.94	26.539		
8,400.0	7,770.0	7,767.0	7,767.0	24.2	13.6	-90.00	-188.3	-195.1	829.5	798.5	30.98	26.773		
8,500.0	7,770.0	7,767.0	7,767.0	25.1	13.6	-90.00	-188.3	-195.1	874.5	842.4	32.13	27.217		
8,600.0	7,770.0	7,767.0	7,767.0	26.0	13.6	-90.00	-188.3	-195.1	928.2	894.8	33.37	27.815		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design				S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 41-7 (EXISTING) - ENCANA WELL - N										Offset Site Error:		0.0 ft	
Survey Program:				8370-Geolink MWD										Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor					
8,700.0	7,770.0	7,767.0	7,767.0	27.0	13.6	-90.00	-188.3	-195.1	989.1	954.4	34.68	28.518					
8,800.0	7,770.0	7,767.0	7,767.0	28.1	13.6	-90.00	-188.3	-195.1	1,055.9	1,019.9	36.05	29.288					
8,900.0	7,770.0	7,767.0	7,767.0	29.2	13.6	-90.00	-188.3	-195.1	1,127.7	1,090.3	37.48	30.092					
9,000.0	7,770.0	7,767.0	7,767.0	30.5	13.6	-90.00	-188.3	-195.1	1,203.5	1,164.6	38.94	30.908					
9,100.0	7,770.0	7,767.0	7,767.0	31.7	13.6	-90.00	-188.3	-195.1	1,282.7	1,242.2	40.44	31.719					
9,200.0	7,770.0	7,767.0	7,767.0	33.0	13.6	-90.00	-188.3	-195.1	1,364.6	1,322.6	41.97	32.515					
9,300.0	7,770.0	7,767.0	7,767.0	34.4	13.6	-90.00	-188.3	-195.1	1,448.7	1,405.2	43.52	33.289					
9,400.0	7,770.0	7,767.0	7,767.0	35.7	13.6	-90.00	-188.3	-195.1	1,534.8	1,489.7	45.09	34.036					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA													Offset Site Error: 0.0 ft	
Survey Program: 8381-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)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,100.0	7,754.2	7,759.2	7,759.2	22.4	13.5	-66.92	-1,635.2	-313.7	1,549.7	1,522.6	27.09	57.203		
8,150.0	7,762.9	7,767.9	7,767.9	22.6	13.6	-74.18	-1,635.2	-313.7	1,505.5	1,477.5	28.01	53.756		
8,200.0	7,768.2	7,773.2	7,773.2	22.9	13.6	-81.92	-1,635.2	-313.7	1,461.0	1,432.1	28.84	50.665		
8,251.3	7,770.0	7,775.0	7,775.0	23.2	13.6	-90.00	-1,635.2	-313.7	1,415.1	1,385.7	29.49	47.987		
8,300.0	7,770.0	7,775.0	7,775.0	23.5	13.6	-90.00	-1,635.2	-313.7	1,371.9	1,342.0	29.95	45.804		
8,400.0	7,770.0	7,775.0	7,775.0	24.2	13.6	-90.00	-1,635.2	-313.7	1,284.3	1,253.4	31.00	41.437		
8,500.0	7,770.0	7,775.0	7,775.0	25.1	13.6	-90.00	-1,635.2	-313.7	1,198.7	1,166.6	32.15	37.291		
8,600.0	7,770.0	7,775.0	7,775.0	26.0	13.6	-90.00	-1,635.2	-313.7	1,115.5	1,082.1	33.38	33.414		
8,700.0	7,770.0	7,775.0	7,775.0	27.0	13.6	-90.00	-1,635.2	-313.7	1,035.2	1,000.5	34.70	29.837		
8,800.0	7,770.0	7,775.0	7,775.0	28.1	13.6	-90.00	-1,635.2	-313.7	958.7	922.6	36.07	26.579		
8,900.0	7,770.0	7,775.0	7,775.0	29.2	13.6	-90.00	-1,635.2	-313.7	886.8	849.3	37.49	23.654		
9,000.0	7,770.0	7,775.0	7,775.0	30.5	13.6	-90.00	-1,635.2	-313.7	820.8	781.9	38.95	21.072		
9,100.0	7,770.0	7,775.0	7,775.0	31.7	13.6	-90.00	-1,635.2	-313.7	762.3	721.9	40.45	18.845		
9,200.0	7,770.0	7,775.0	7,775.0	33.0	13.6	-90.00	-1,635.2	-313.7	713.1	671.1	41.98	16.987		
9,300.0	7,770.0	7,775.0	7,775.0	34.4	13.6	-90.00	-1,635.2	-313.7	675.2	631.7	43.53	15.510		
9,400.0	7,770.0	7,775.0	7,775.0	35.7	13.6	-90.00	-1,635.2	-313.7	650.6	605.5	45.11	14.423		
9,500.0	7,770.0	7,775.0	7,775.0	37.1	13.6	-90.00	-1,635.2	-313.7	640.8	594.1	46.70	13.722		
9,513.1	7,770.0	7,775.0	7,775.0	37.3	13.6	-90.00	-1,635.2	-313.7	640.7	593.8	46.91	13.657 CC, ES		
9,600.0	7,770.0	7,775.0	7,775.0	38.6	13.6	-90.00	-1,635.2	-313.7	646.5	598.2	48.31	13.384		
9,700.0	7,770.0	7,775.0	7,775.0	40.0	13.6	-90.00	-1,635.2	-313.7	667.4	617.4	49.93	13.367 SF		
9,800.0	7,770.0	7,775.0	7,775.0	41.5	13.6	-90.00	-1,635.2	-313.7	702.0	650.4	51.56	13.614		
9,900.0	7,770.0	7,775.0	7,775.0	43.0	13.6	-90.00	-1,635.2	-313.7	748.4	695.2	53.20	14.067		
10,000.0	7,770.0	7,775.0	7,775.0	44.6	13.6	-90.00	-1,635.2	-313.7	804.7	749.8	54.86	14.669		
10,100.0	7,770.0	7,775.0	7,775.0	46.1	13.6	-90.00	-1,635.2	-313.7	868.8	812.3	56.52	15.373		
10,200.0	7,770.0	7,775.0	7,775.0	47.7	13.6	-90.00	-1,635.2	-313.7	939.3	881.1	58.18	16.143		
10,300.0	7,770.0	7,775.0	7,775.0	49.2	13.6	-90.00	-1,635.2	-313.7	1,014.7	954.8	59.86	16.952		
10,400.0	7,770.0	7,775.0	7,775.0	50.8	13.6	-90.00	-1,635.2	-313.7	1,094.1	1,032.5	61.54	17.779		
10,500.0	7,770.0	7,775.0	7,775.0	52.4	13.6	-90.00	-1,635.2	-313.7	1,176.6	1,113.4	63.22	18.610		
10,600.0	7,770.0	7,775.0	7,775.0	54.0	13.6	-90.00	-1,635.2	-313.7	1,261.6	1,196.7	64.91	19.436		
10,700.0	7,770.0	7,775.0	7,775.0	55.6	13.6	-90.00	-1,635.2	-313.7	1,348.7	1,282.1	66.61	20.250		
10,800.0	7,770.0	7,775.0	7,775.0	57.2	13.6	-90.00	-1,635.2	-313.7	1,437.5	1,369.2	68.30	21.046		
10,900.0	7,770.0	7,775.0	7,775.0	58.9	13.6	-90.00	-1,635.2	-313.7	1,527.7	1,457.7	70.00	21.823		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - N													Offset Site Error:	0.0 ft
Survey Program: 8320-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
2,800.0	2,779.9	2,800.9	2,800.9	7.2	4.9	-74.43	-1,116.5	-1,217.7	1,547.4	1,535.4	11.95	129.474		
2,900.0	2,878.8	2,899.8	2,899.8	7.5	5.1	-74.94	-1,116.5	-1,217.7	1,543.5	1,531.0	12.43	124.148		
3,000.0	2,977.8	2,998.8	2,998.8	7.8	5.2	-75.46	-1,116.5	-1,217.7	1,539.7	1,526.8	12.91	119.221		
3,100.0	3,076.7	3,097.7	3,097.7	8.1	5.4	-75.98	-1,116.5	-1,217.7	1,536.1	1,522.7	13.40	114.650		
3,200.0	3,175.7	3,196.7	3,196.7	8.4	5.6	-76.50	-1,116.5	-1,217.7	1,532.6	1,518.7	13.88	110.401		
3,300.0	3,274.6	3,295.6	3,295.6	8.7	5.8	-77.03	-1,116.5	-1,217.7	1,529.3	1,514.9	14.37	106.441		
3,400.0	3,373.5	3,394.5	3,394.5	9.1	5.9	-77.55	-1,116.5	-1,217.7	1,526.0	1,511.2	14.85	102.745		
3,500.0	3,472.5	3,493.5	3,493.5	9.4	6.1	-78.08	-1,116.5	-1,217.7	1,522.9	1,507.6	15.34	99.287		
3,600.0	3,571.4	3,592.4	3,592.4	9.7	6.3	-78.61	-1,116.5	-1,217.7	1,520.0	1,504.1	15.83	96.047		
3,700.0	3,670.4	3,691.4	3,691.4	10.0	6.4	-79.14	-1,116.5	-1,217.7	1,517.1	1,500.8	16.31	93.005		
3,800.0	3,769.3	3,790.3	3,790.3	10.3	6.6	-79.68	-1,116.5	-1,217.7	1,514.4	1,497.6	16.80	90.146		
3,900.0	3,868.2	3,889.2	3,889.2	10.6	6.8	-80.21	-1,116.5	-1,217.7	1,511.9	1,494.6	17.29	87.454		
4,000.0	3,967.2	3,988.2	3,988.2	10.9	7.0	-80.75	-1,116.5	-1,217.7	1,509.4	1,491.7	17.78	84.917		
4,100.0	4,066.1	4,087.1	4,087.1	11.2	7.1	-81.29	-1,116.5	-1,217.7	1,507.2	1,488.9	18.26	82.521		
4,200.0	4,165.1	4,186.1	4,186.1	11.5	7.3	-81.83	-1,116.5	-1,217.7	1,505.0	1,486.2	18.75	80.258		
4,300.0	4,264.0	4,285.0	4,285.0	11.8	7.5	-82.38	-1,116.5	-1,217.7	1,503.0	1,483.7	19.24	78.116		
4,400.0	4,362.9	4,383.9	4,383.9	12.1	7.7	-82.92	-1,116.5	-1,217.7	1,501.1	1,481.4	19.73	76.087		
4,500.0	4,461.9	4,482.9	4,482.9	12.4	7.8	-83.47	-1,116.5	-1,217.7	1,499.4	1,479.1	20.22	74.163		
4,600.0	4,560.8	4,581.8	4,581.8	12.8	8.0	-84.01	-1,116.5	-1,217.7	1,497.8	1,477.1	20.71	72.337		
4,700.0	4,659.7	4,680.7	4,680.7	13.1	8.2	-84.56	-1,116.5	-1,217.7	1,496.3	1,475.1	21.19	70.603		
4,800.0	4,758.7	4,779.7	4,779.7	13.4	8.3	-85.11	-1,116.5	-1,217.7	1,495.0	1,473.3	21.68	68.954		
4,900.0	4,857.6	4,878.6	4,878.6	13.7	8.5	-85.66	-1,116.5	-1,217.7	1,493.8	1,471.6	22.17	67.385		
5,000.0	4,956.6	4,977.6	4,977.6	14.0	8.7	-86.21	-1,116.5	-1,217.7	1,492.8	1,470.1	22.65	65.891		
5,100.0	5,055.5	5,076.5	5,076.5	14.3	8.9	-86.76	-1,116.5	-1,217.7	1,491.9	1,468.7	23.14	64.467		
5,200.0	5,154.4	5,175.4	5,175.4	14.6	9.0	-87.31	-1,116.5	-1,217.7	1,491.1	1,467.5	23.63	63.109		
5,300.0	5,253.4	5,274.4	5,274.4	14.9	9.2	-87.86	-1,116.5	-1,217.7	1,490.5	1,466.4	24.11	61.813		
5,400.0	5,352.3	5,373.3	5,373.3	15.2	9.4	-88.41	-1,116.5	-1,217.7	1,490.0	1,465.4	24.60	60.576		
5,500.0	5,451.3	5,472.3	5,472.3	15.5	9.6	-88.97	-1,116.5	-1,217.7	1,489.7	1,464.6	25.08	59.394		
5,600.0	5,550.2	5,571.2	5,571.2	15.8	9.7	-89.52	-1,116.5	-1,217.7	1,489.5	1,463.9	25.56	58.265		
5,686.8	5,636.1	5,657.1	5,657.1	16.1	9.9	-90.00	-1,116.5	-1,217.7	1,489.4	1,463.4	25.98	57.324		
5,700.0	5,649.1	5,670.1	5,670.1	16.1	9.9	-90.07	-1,116.5	-1,217.7	1,489.4	1,463.4	26.05	57.184		
5,800.0	5,748.1	5,769.1	5,769.1	16.5	10.1	-90.63	-1,116.5	-1,217.7	1,489.5	1,463.0	26.53	56.150		
5,900.0	5,847.0	5,868.0	5,868.0	16.8	10.2	-91.18	-1,116.5	-1,217.7	1,489.7	1,462.7	27.01	55.160		
6,000.0	5,945.9	5,966.9	5,966.9	17.1	10.4	-91.73	-1,116.5	-1,217.7	1,490.1	1,462.6	27.49	54.212		
6,100.0	6,044.9	6,065.9	6,065.9	17.4	10.6	-92.28	-1,116.5	-1,217.7	1,490.6	1,462.7	27.96	53.304		
6,200.0	6,143.8	6,164.8	6,164.8	17.7	10.8	-92.84	-1,116.5	-1,217.7	1,491.3	1,462.8	28.44	52.433		
6,300.0	6,242.8	6,263.8	6,263.8	18.0	10.9	-93.39	-1,116.5	-1,217.7	1,492.1	1,463.2	28.92	51.598		
6,400.0	6,341.7	6,362.7	6,362.7	18.3	11.1	-93.94	-1,116.5	-1,217.7	1,493.0	1,463.6	29.39	50.797		
6,500.0	6,440.6	6,461.6	6,461.6	18.6	11.3	-94.49	-1,116.5	-1,217.7	1,494.1	1,464.2	29.86	50.029		
6,600.0	6,539.6	6,560.6	6,560.6	18.9	11.5	-95.04	-1,116.5	-1,217.7	1,495.3	1,465.0	30.34	49.291		
6,700.0	6,638.5	6,659.5	6,659.5	19.2	11.6	-95.59	-1,116.5	-1,217.7	1,496.7	1,465.9	30.81	48.583		
6,800.0	6,737.5	6,758.5	6,758.5	19.6	11.8	-96.13	-1,116.5	-1,217.7	1,498.2	1,466.9	31.28	47.902		
6,900.0	6,836.4	6,857.4	6,857.4	19.9	12.0	-96.68	-1,116.5	-1,217.7	1,499.8	1,468.1	31.74	47.249		
7,000.0	6,935.3	6,956.3	6,956.3	20.2	12.1	-97.22	-1,116.5	-1,217.7	1,501.6	1,469.4	32.21	46.621		
7,087.6	7,022.0	7,043.0	7,043.0	20.4	12.3	-97.70	-1,116.5	-1,217.7	1,503.3	1,470.6	32.62	46.091		
7,100.0	7,034.3	7,055.3	7,055.3	20.5	12.3	-91.23	-1,116.5	-1,217.7	1,503.4	1,470.7	32.67	46.016		
7,150.0	7,083.8	7,104.8	7,104.8	20.6	12.4	-62.73	-1,116.5	-1,217.7	1,501.9	1,469.1	32.81	45.769		
7,200.0	7,133.2	7,154.2	7,154.2	20.7	12.5	-39.49	-1,116.5	-1,217.7	1,497.0	1,464.2	32.83	45.597		
7,250.0	7,182.3	7,203.3	7,203.3	20.8	12.6	-24.94	-1,116.5	-1,217.7	1,488.8	1,456.0	32.72	45.500		
7,300.0	7,230.8	7,251.8	7,251.8	20.9	12.7	-16.04	-1,116.5	-1,217.7	1,477.2	1,444.7	32.48	45.477		
7,350.0	7,278.4	7,299.4	7,299.4	21.0	12.7	-10.22	-1,116.5	-1,217.7	1,462.4	1,430.3	32.12	45.530		
7,400.0	7,325.0	7,346.0	7,346.0	21.0	12.8	-6.11	-1,116.5	-1,217.7	1,444.4	1,412.8	31.63	45.660		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - N													Offset Site Error:	0.0 ft
Survey Program: 8320-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
7,450.0	7,370.3	7,391.3	7,391.3	21.1	12.9	-2.97	-1,116.5	-1,217.7	1,423.3	1,392.3	31.03	45.868		
7,500.0	7,414.0	7,435.0	7,435.0	21.1	13.0	-0.40	-1,116.5	-1,217.7	1,399.2	1,368.8	30.31	46.157		
7,550.0	7,456.1	7,477.1	7,477.1	21.2	13.1	1.85	-1,116.5	-1,217.7	1,372.1	1,342.6	29.49	46.528		
7,600.0	7,496.2	7,517.2	7,517.2	21.2	13.1	3.96	-1,116.5	-1,217.7	1,342.3	1,313.8	28.57	46.981		
7,650.0	7,534.2	7,555.2	7,555.2	21.2	13.2	6.05	-1,116.5	-1,217.7	1,309.9	1,282.4	27.57	47.510		
7,700.0	7,569.9	7,590.9	7,590.9	21.3	13.2	8.26	-1,116.5	-1,217.7	1,275.1	1,248.6	26.51	48.099		
7,750.0	7,603.1	7,624.1	7,624.1	21.4	13.3	10.69	-1,116.5	-1,217.7	1,237.9	1,212.5	25.41	48.712		
7,800.0	7,633.7	7,654.7	7,654.7	21.4	13.4	13.49	-1,116.5	-1,217.7	1,198.7	1,174.4	24.33	49.276		
7,850.0	7,661.5	7,682.5	7,682.5	21.5	13.4	16.84	-1,116.5	-1,217.7	1,157.6	1,134.3	23.32	49.646		
7,900.0	7,686.3	7,707.3	7,707.3	21.6	13.5	20.96	-1,116.5	-1,217.7	1,114.8	1,092.3	22.50	49.559		
7,950.0	7,708.1	7,729.1	7,729.1	21.8	13.5	26.16	-1,116.5	-1,217.7	1,070.6	1,048.6	22.03	48.598		
8,000.0	7,726.8	7,747.8	7,747.8	22.0	13.5	32.82	-1,116.5	-1,217.7	1,025.2	1,003.1	22.16	46.265		
8,050.0	7,742.1	7,763.1	7,763.1	22.2	13.5	41.35	-1,116.5	-1,217.7	978.9	955.8	23.12	42.348		
8,100.0	7,754.2	7,775.2	7,775.2	22.4	13.6	51.99	-1,116.5	-1,217.7	931.9	907.0	24.91	37.410		
8,150.0	7,762.9	7,783.9	7,783.9	22.6	13.6	64.44	-1,116.5	-1,217.7	884.5	857.4	27.07	32.667		
8,200.0	7,768.2	7,789.2	7,789.2	22.9	13.6	77.54	-1,116.5	-1,217.7	836.9	808.1	28.79	29.071		
8,251.3	7,770.0	7,791.0	7,791.0	23.2	13.6	90.00	-1,116.5	-1,217.7	788.3	758.8	29.52	26.707		
8,300.0	7,770.0	7,791.0	7,791.0	23.5	13.6	90.00	-1,116.5	-1,217.7	742.6	712.7	29.98	24.771		
8,400.0	7,770.0	7,791.0	7,791.0	24.2	13.6	90.00	-1,116.5	-1,217.7	650.1	619.1	31.02	20.955		
8,500.0	7,770.0	7,791.0	7,791.0	25.1	13.6	90.00	-1,116.5	-1,217.7	560.1	528.0	32.17	17.410		
8,600.0	7,770.0	7,791.0	7,791.0	26.0	13.6	90.00	-1,116.5	-1,217.7	474.2	440.8	33.41	14.193		
8,700.0	7,770.0	7,791.0	7,791.0	27.0	13.6	90.00	-1,116.5	-1,217.7	395.0	360.2	34.72	11.374		
8,800.0	7,770.0	7,791.0	7,791.0	28.1	13.6	90.00	-1,116.5	-1,217.7	327.3	291.2	36.10	9.067		
8,900.0	7,770.0	7,791.0	7,791.0	29.2	13.6	90.00	-1,116.5	-1,217.7	279.7	242.2	37.52	7.455		
8,994.4	7,770.0	7,791.0	7,791.0	30.4	13.6	90.00	-1,116.5	-1,217.7	263.3	224.4	38.90	6.769 CC		
9,000.0	7,770.0	7,791.0	7,791.0	30.5	13.6	90.00	-1,116.5	-1,217.7	263.4	224.4	38.98	6.756 ES, SF		
9,100.0	7,770.0	7,791.0	7,791.0	31.7	13.6	90.00	-1,116.5	-1,217.7	283.7	243.2	40.48	7.008		
9,200.0	7,770.0	7,791.0	7,791.0	33.0	13.6	90.00	-1,116.5	-1,217.7	334.1	292.1	42.01	7.953		
9,300.0	7,770.0	7,791.0	7,791.0	34.4	13.6	90.00	-1,116.5	-1,217.7	403.4	359.8	43.56	9.260		
9,400.0	7,770.0	7,791.0	7,791.0	35.7	13.6	90.00	-1,116.5	-1,217.7	483.6	438.4	45.13	10.714		
9,500.0	7,770.0	7,791.0	7,791.0	37.1	13.6	90.00	-1,116.5	-1,217.7	570.1	523.3	46.73	12.200		
9,600.0	7,770.0	7,791.0	7,791.0	38.6	13.6	90.00	-1,116.5	-1,217.7	660.4	612.0	48.33	13.663		
9,700.0	7,770.0	7,791.0	7,791.0	40.0	13.6	90.00	-1,116.5	-1,217.7	753.1	703.2	49.96	15.076		
9,800.0	7,770.0	7,791.0	7,791.0	41.5	13.6	90.00	-1,116.5	-1,217.7	847.6	796.0	51.59	16.429		
9,900.0	7,770.0	7,791.0	7,791.0	43.0	13.6	90.00	-1,116.5	-1,217.7	943.1	889.9	53.23	17.717		
10,000.0	7,770.0	7,791.0	7,791.0	44.6	13.6	90.00	-1,116.5	-1,217.7	1,039.5	984.6	54.88	18.940		
10,100.0	7,770.0	7,791.0	7,791.0	46.1	13.6	90.00	-1,116.5	-1,217.7	1,136.5	1,080.0	56.54	20.100		
10,200.0	7,770.0	7,791.0	7,791.0	47.7	13.6	90.00	-1,116.5	-1,217.7	1,234.0	1,175.8	58.21	21.199		
10,300.0	7,770.0	7,791.0	7,791.0	49.2	13.6	90.00	-1,116.5	-1,217.7	1,331.9	1,272.0	59.89	22.241		
10,400.0	7,770.0	7,791.0	7,791.0	50.8	13.6	90.00	-1,116.5	-1,217.7	1,430.1	1,368.5	61.57	23.228		
10,500.0	7,770.0	7,791.0	7,791.0	52.4	13.6	90.00	-1,116.5	-1,217.7	1,528.5	1,465.2	63.25	24.165		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2H-7H-E168 - Hz - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
6,900.0	6,836.4	9,727.9	7,550.0	19.9	53.0	-29.88	204.6	-2,148.1	1,512.9	1,462.1	50.80	29.784		
7,000.0	6,935.3	9,734.6	7,550.0	20.2	53.0	-29.56	211.2	-2,148.7	1,456.3	1,405.1	51.26	28.409		
7,087.6	7,022.0	9,740.4	7,550.0	20.4	53.1	-29.29	217.1	-2,149.3	1,410.7	1,359.0	51.67	27.302		
7,100.0	7,034.3	9,741.1	7,550.0	20.5	53.1	-22.15	217.8	-2,149.3	1,404.5	1,352.6	51.95	27.034		
7,150.0	7,083.8	9,741.9	7,550.0	20.6	53.1	8.80	218.5	-2,149.4	1,380.3	1,327.3	52.98	26.055		
7,200.0	7,133.2	9,739.1	7,550.0	20.7	53.1	34.10	215.8	-2,149.2	1,357.3	1,303.5	53.80	25.228		
7,250.0	7,182.3	9,732.9	7,550.0	20.8	53.0	50.33	209.6	-2,148.6	1,335.5	1,281.1	54.42	24.541		
7,300.0	7,230.8	9,723.3	7,550.0	20.9	52.9	60.51	200.0	-2,147.6	1,315.2	1,260.4	54.83	23.987		
7,350.0	7,278.4	9,710.3	7,550.0	21.0	52.8	67.20	187.1	-2,146.4	1,296.4	1,241.4	55.04	23.555		
7,400.0	7,325.0	9,694.0	7,550.0	21.0	52.6	71.79	170.9	-2,144.8	1,279.2	1,224.1	55.05	23.237		
7,450.0	7,370.3	9,674.4	7,550.0	21.1	52.3	75.00	151.4	-2,143.0	1,263.6	1,208.7	54.88	23.026		
7,500.0	7,414.0	9,651.7	7,550.0	21.1	52.1	77.26	128.8	-2,140.8	1,249.5	1,195.0	54.53	22.912		
7,550.0	7,456.1	9,626.0	7,550.0	21.2	51.8	78.82	103.2	-2,138.3	1,237.0	1,182.9	54.04	22.888		
7,600.0	7,496.2	9,597.3	7,550.0	21.2	51.4	79.84	74.6	-2,135.6	1,225.9	1,172.5	53.43	22.946		
7,650.0	7,534.2	9,565.9	7,550.0	21.2	51.1	80.45	43.4	-2,132.6	1,216.2	1,163.5	52.71	23.073		
7,700.0	7,569.9	9,531.9	7,550.0	21.3	50.7	80.75	9.5	-2,129.3	1,207.7	1,155.8	51.92	23.261		
7,750.0	7,603.1	9,495.4	7,550.0	21.4	50.3	80.81	-26.8	-2,125.8	1,200.3	1,149.3	51.09	23.495		
7,800.0	7,633.7	9,456.6	7,550.0	21.4	49.9	80.70	-65.4	-2,122.1	1,193.9	1,143.6	50.24	23.762		
7,850.0	7,661.5	9,415.8	7,550.0	21.5	49.4	80.47	-106.1	-2,118.2	1,188.1	1,138.7	49.41	24.046		
7,900.0	7,686.3	9,373.1	7,550.0	21.6	49.0	80.18	-148.6	-2,114.1	1,183.0	1,134.3	48.62	24.330		
7,950.0	7,708.1	9,328.7	7,550.0	21.8	48.5	79.87	-192.8	-2,109.9	1,178.2	1,130.3	47.90	24.598		
8,000.0	7,726.8	9,282.8	7,550.0	22.0	48.0	79.59	-238.4	-2,105.5	1,173.8	1,126.5	47.26	24.836		
8,050.0	7,742.1	9,235.7	7,550.0	22.2	47.5	79.37	-285.3	-2,101.0	1,169.5	1,122.8	46.72	25.031		
8,100.0	7,754.2	9,187.6	7,550.0	22.4	47.1	79.24	-333.2	-2,096.4	1,165.2	1,118.9	46.28	25.177		
8,150.0	7,762.9	9,138.7	7,550.0	22.6	46.6	79.22	-381.8	-2,091.7	1,160.8	1,114.9	45.94	25.271		
8,200.0	7,768.2	9,089.3	7,550.0	22.9	46.1	79.33	-431.0	-2,087.0	1,156.4	1,110.7	45.67	25.319		
8,251.3	7,770.0	9,038.3	7,550.0	23.2	45.7	79.60	-481.8	-2,082.1	1,151.6	1,106.2	45.47	25.329		
8,300.0	7,770.0	8,989.9	7,550.0	23.5	45.2	79.56	-530.0	-2,077.5	1,147.1	1,101.9	45.15	25.403		
8,400.0	7,770.0	8,890.3	7,550.0	24.2	44.4	79.47	-629.1	-2,067.9	1,137.6	1,093.0	44.62	25.499		
8,500.0	7,770.0	8,790.8	7,550.0	25.1	43.6	79.38	-728.2	-2,058.4	1,128.2	1,084.0	44.20	25.523		
8,600.0	7,770.0	8,691.2	7,550.0	26.0	42.8	79.29	-827.3	-2,048.9	1,118.8	1,074.9	43.91	25.482		
8,700.0	7,770.0	8,591.7	7,550.0	27.0	42.1	79.20	-926.4	-2,039.4	1,109.4	1,065.7	43.71	25.381		
8,800.0	7,770.0	8,492.1	7,550.0	28.1	41.5	79.10	-1,025.5	-2,029.8	1,100.0	1,056.4	43.61	25.222		
8,900.0	7,770.0	8,392.6	7,550.0	29.2	41.0	79.01	-1,124.6	-2,020.3	1,090.6	1,047.0	43.61	25.009		
9,000.0	7,770.0	8,293.1	7,550.0	30.5	40.5	78.91	-1,223.6	-2,010.8	1,081.2	1,037.5	43.70	24.740		
9,100.0	7,770.0	8,193.5	7,550.0	31.7	40.1	78.81	-1,322.7	-2,001.3	1,071.8	1,028.0	43.90	24.417		
9,200.0	7,770.0	8,131.4	7,548.5	33.0	39.8	78.68	-1,384.6	-1,995.8	1,063.9	1,019.2	44.63	23.836		
9,300.0	7,770.0	8,079.2	7,542.6	34.4	39.6	78.33	-1,436.4	-1,992.7	1,060.2	1,014.7	45.51	23.299		
9,329.0	7,770.0	8,064.2	7,540.1	34.7	39.6	78.19	-1,451.0	-1,992.0	1,060.0	1,014.3	45.76	23.163 CC, ES		
9,400.0	7,770.0	8,028.2	7,532.5	35.7	39.5	77.78	-1,486.3	-1,991.0	1,061.2	1,014.8	46.41	22.866		
9,500.0	7,770.0	7,979.2	7,518.9	37.1	39.3	77.06	-1,533.3	-1,990.8	1,067.1	1,019.7	47.35	22.535		
9,600.0	7,770.0	7,932.8	7,502.4	38.6	39.1	76.21	-1,576.7	-1,991.7	1,078.0	1,029.6	48.33	22.303		
9,700.0	7,770.0	7,900.0	7,488.9	40.0	39.0	75.53	-1,606.5	-1,993.1	1,094.2	1,044.7	49.48	22.113 SF		
9,800.0	7,770.0	7,850.0	7,465.1	41.5	38.8	74.35	-1,650.4	-1,996.4	1,115.6	1,065.2	50.41	22.129		
9,900.0	7,770.0	7,800.0	7,437.9	43.0	38.6	73.04	-1,692.0	-2,000.9	1,142.8	1,091.4	51.34	22.261		
10,000.0	7,770.0	7,777.3	7,424.4	44.6	38.6	72.41	-1,710.1	-2,003.4	1,175.0	1,122.4	52.61	22.335		
10,100.0	7,770.0	7,750.0	7,407.3	46.1	38.5	71.62	-1,731.1	-2,006.7	1,212.7	1,158.9	53.81	22.539		
10,200.0	7,770.0	7,717.4	7,385.7	47.7	38.3	70.64	-1,755.1	-2,011.2	1,255.4	1,200.5	54.93	22.857		
10,300.0	7,770.0	7,700.0	7,373.6	49.2	38.3	70.11	-1,767.4	-2,013.8	1,303.0	1,246.8	56.24	23.168		
10,400.0	7,770.0	7,667.5	7,350.2	50.8	38.1	69.09	-1,789.3	-2,019.0	1,354.9	1,297.5	57.33	23.632		
10,500.0	7,770.0	7,650.0	7,337.2	52.4	38.1	68.53	-1,800.6	-2,022.0	1,411.0	1,352.4	58.63	24.068		
10,600.0	7,770.0	7,625.9	7,318.7	54.0	38.0	67.76	-1,815.4	-2,026.4	1,470.8	1,411.0	59.81	24.590		

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 Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2H-7H-E168 - Hz - Plan #2													Offset Site Error: 0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)			
10,700.0	7,770.0	7,600.0	7,298.1	55.6	37.8	66.92	-1,830.4	-2,031.3	1,534.2	1,473.3	60.95	25.173	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Morgan Hills 1D-7H-A168
Project:	DJ Wattenberg	TVD Reference:	HZ @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	HZ @ 5035.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Morgan Hills 1D-7H-A168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to HZ @ 5035.0ft

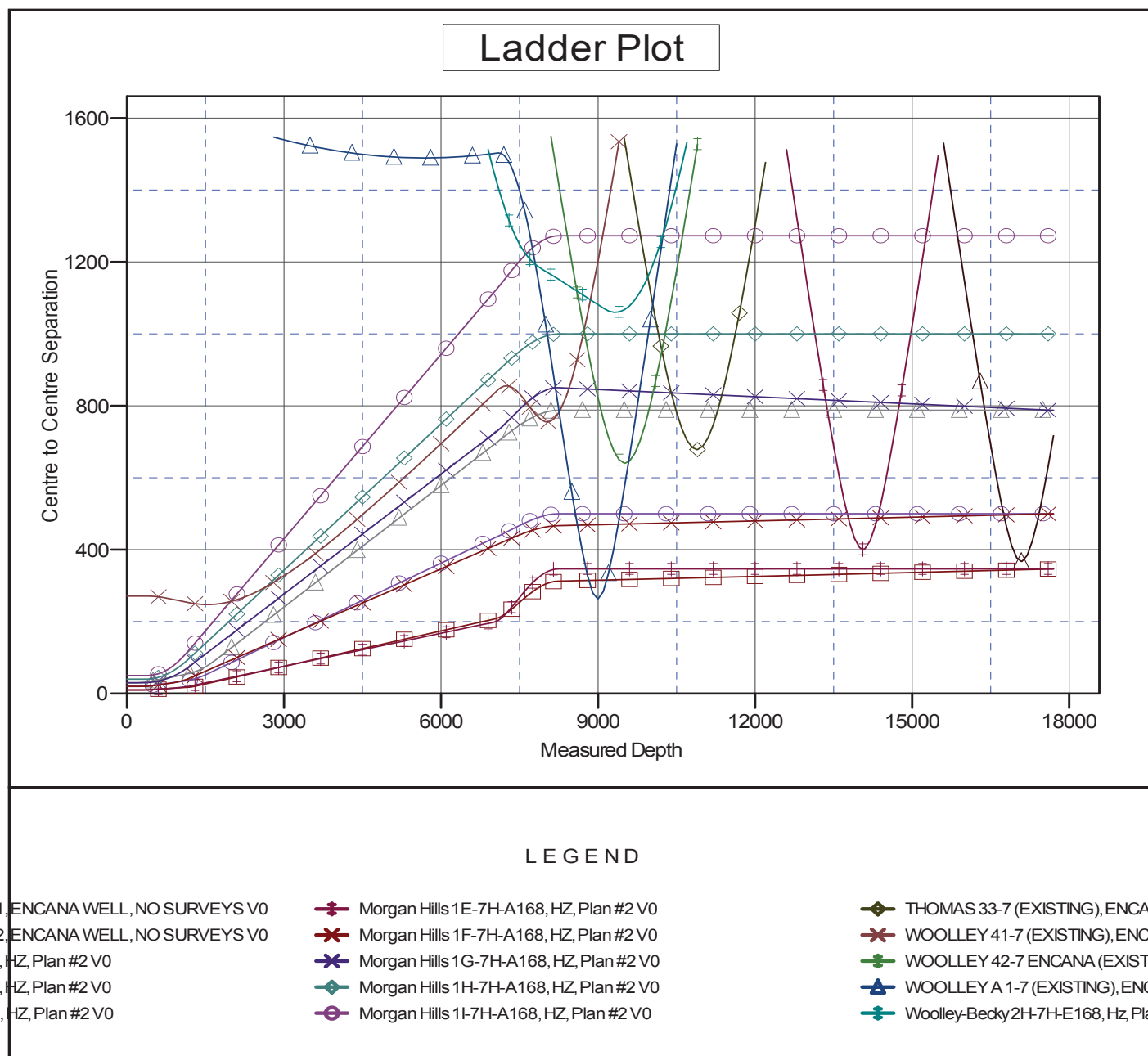
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Morgan Hills 1D-7H-A168

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.30°



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