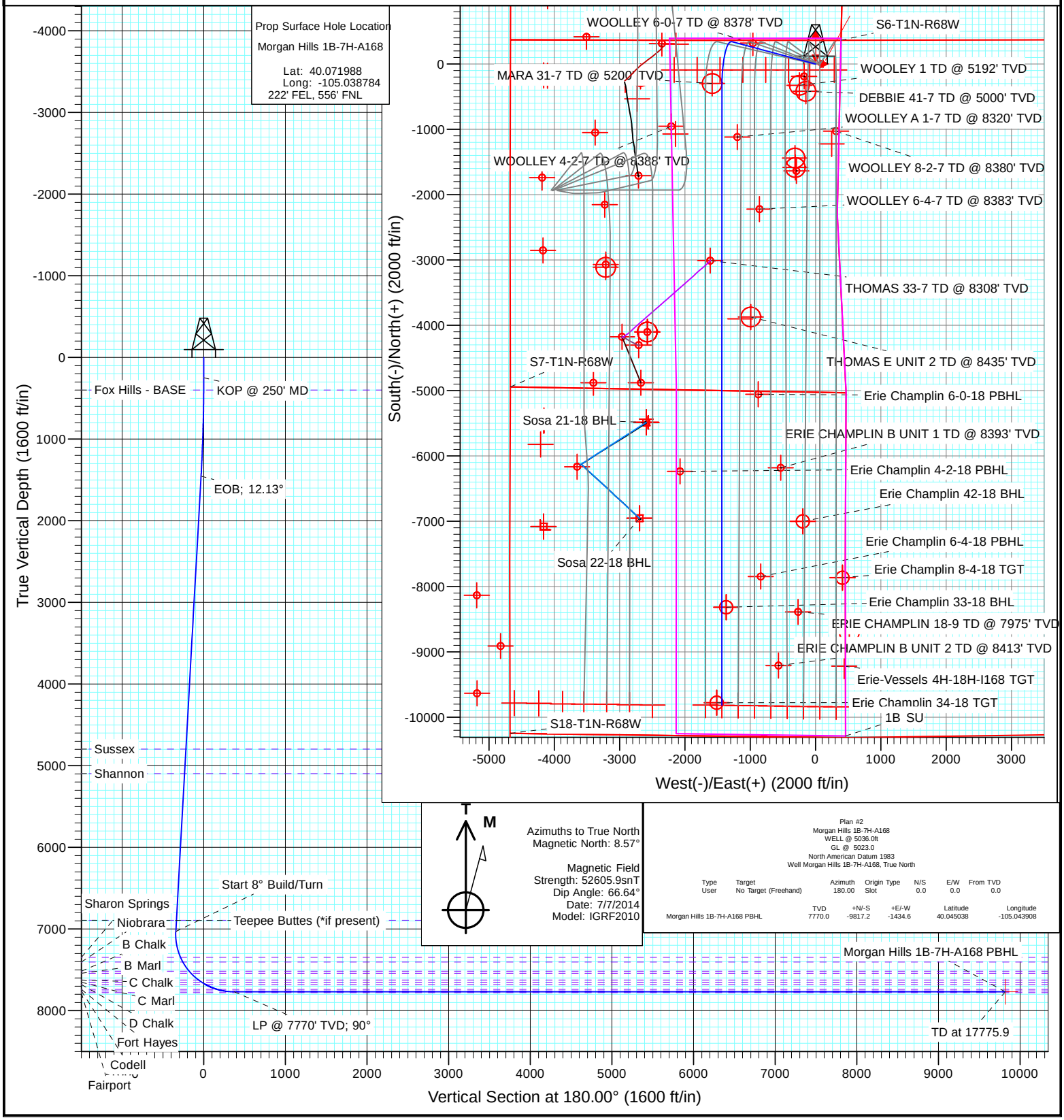
encana natural gas

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

CATHEDRAL

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.0		KOP @ 250' MD
3	1462.7	12.13	284.99	1453.7	33.1	-123.5	1.00	284.99	-33.1		EOB; 12.13°
4	7167.0	12.13	284.99	7030.7	342.9	-1281.1	0.00	0.00	-342.9		Start 8° Build/Turn
5	8330.9	90.00	180.00	7770.0	-372.2	-1434.6	8.00	-104.67	372.2		LP @ 7770' TVD; 90°
6	17775.9	90.00	180.00	7770.0	-9817.2	-1434.6	0.00	0.00	9817.2	Morgan Hills 1B-7H-A168 PBHL	TD at 17775.9



Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5036.0ft
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5036.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1B-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 1B-7H-A168				
Well Position	**+N/-S**	0.0 ft	**Northing:**	1,269,408.48 ft	**Latitude:**	40.071988
	+E/-W	0.0 ft	**Easting:**	3,129,080.60 ft	**Longitude:**	-105.038784
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	0.0 ft	**Ground Level:**	5,023.0 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) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.0	0.0	0.0	180.00	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,462.7	12.13	284.99	1,453.7	33.1	-123.5	1.00	1.00	0.00	284.99	
7,167.0	12.13	284.99	7,030.7	342.9	-1,281.1	0.00	0.00	0.00	0.00	
8,330.9	90.00	180.00	7,770.0	-372.2	-1,434.6	8.00	6.69	-9.02	-104.67	
17,775.9	90.00	180.00	7,770.0	-9,817.2	-1,434.6	0.00	0.00	0.00	0.00	Morgan Hills 1B-7H-A

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Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1B-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	
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	KOP @ 250' MD
300.0	0.50	284.99	300.0	0.1	-0.2	-0.1	1.00	1.00	
400.0	1.50	284.99	400.0	0.5	-1.9	-0.5	1.00	1.00	Fox Hills - BASE
500.0	2.50	284.99	499.9	1.4	-5.3	-1.4	1.00	1.00	
600.0	3.50	284.99	599.8	2.8	-10.3	-2.8	1.00	1.00	
700.0	4.50	284.99	699.5	4.6	-17.1	-4.6	1.00	1.00	
800.0	5.50	284.99	799.2	6.8	-25.5	-6.8	1.00	1.00	
900.0	6.50	284.99	898.6	9.5	-35.6	-9.5	1.00	1.00	
1,000.0	7.50	284.99	997.9	12.7	-47.4	-12.7	1.00	1.00	
1,100.0	8.50	284.99	1,096.9	16.3	-60.8	-16.3	1.00	1.00	
1,200.0	9.50	284.99	1,195.7	20.3	-75.9	-20.3	1.00	1.00	
1,300.0	10.50	284.99	1,294.1	24.8	-92.7	-24.8	1.00	1.00	
1,400.0	11.50	284.99	1,392.3	29.7	-111.1	-29.7	1.00	1.00	
1,462.7	12.13	284.99	1,453.7	33.1	-123.5	-33.1	1.00	1.00	EOB; 12.13°
1,500.0	12.13	284.99	1,490.1	35.1	-131.1	-35.1	0.00	0.00	
1,600.0	12.13	284.99	1,587.9	40.5	-151.4	-40.5	0.00	0.00	
1,700.0	12.13	284.99	1,685.7	46.0	-171.7	-46.0	0.00	0.00	
1,800.0	12.13	284.99	1,783.4	51.4	-192.0	-51.4	0.00	0.00	
1,900.0	12.13	284.99	1,881.2	56.8	-212.3	-56.8	0.00	0.00	
2,000.0	12.13	284.99	1,979.0	62.2	-232.5	-62.2	0.00	0.00	
2,100.0	12.13	284.99	2,076.7	67.7	-252.8	-67.7	0.00	0.00	
2,200.0	12.13	284.99	2,174.5	73.1	-273.1	-73.1	0.00	0.00	
2,300.0	12.13	284.99	2,272.3	78.5	-293.4	-78.5	0.00	0.00	
2,400.0	12.13	284.99	2,370.0	84.0	-313.7	-84.0	0.00	0.00	
2,500.0	12.13	284.99	2,467.8	89.4	-334.0	-89.4	0.00	0.00	
2,600.0	12.13	284.99	2,565.6	94.8	-354.3	-94.8	0.00	0.00	
2,700.0	12.13	284.99	2,663.4	100.3	-374.6	-100.3	0.00	0.00	
2,800.0	12.13	284.99	2,761.1	105.7	-394.9	-105.7	0.00	0.00	
2,900.0	12.13	284.99	2,858.9	111.1	-415.2	-111.1	0.00	0.00	
3,000.0	12.13	284.99	2,956.7	116.6	-435.5	-116.6	0.00	0.00	
3,100.0	12.13	284.99	3,054.4	122.0	-455.8	-122.0	0.00	0.00	
3,200.0	12.13	284.99	3,152.2	127.4	-476.1	-127.4	0.00	0.00	
3,300.0	12.13	284.99	3,250.0	132.9	-496.4	-132.9	0.00	0.00	
3,400.0	12.13	284.99	3,347.7	138.3	-516.7	-138.3	0.00	0.00	
3,500.0	12.13	284.99	3,445.5	143.7	-536.9	-143.7	0.00	0.00	
3,600.0	12.13	284.99	3,543.3	149.2	-557.2	-149.2	0.00	0.00	
3,700.0	12.13	284.99	3,641.0	154.6	-577.5	-154.6	0.00	0.00	
3,800.0	12.13	284.99	3,738.8	160.0	-597.8	-160.0	0.00	0.00	
3,900.0	12.13	284.99	3,836.6	165.5	-618.1	-165.5	0.00	0.00	
4,000.0	12.13	284.99	3,934.3	170.9	-638.4	-170.9	0.00	0.00	
4,100.0	12.13	284.99	4,032.1	176.3	-658.7	-176.3	0.00	0.00	
4,200.0	12.13	284.99	4,129.9	181.8	-679.0	-181.8	0.00	0.00	
4,300.0	12.13	284.99	4,227.7	187.2	-699.3	-187.2	0.00	0.00	
4,400.0	12.13	284.99	4,325.4	192.6	-719.6	-192.6	0.00	0.00	
4,500.0	12.13	284.99	4,423.2	198.1	-739.9	-198.1	0.00	0.00	
4,600.0	12.13	284.99	4,521.0	203.5	-760.2	-203.5	0.00	0.00	
4,700.0	12.13	284.99	4,618.7	208.9	-780.5	-208.9	0.00	0.00	
4,800.0	12.13	284.99	4,716.5	214.3	-800.8	-214.3	0.00	0.00	
4,882.3	12.13	284.99	4,797.0	218.8	-817.5	-218.8	0.00	0.00	Sussex

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Well:	Morgan Hills 1B-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	12.13	284.99	4,814.3	219.8	-821.1	-219.8	0.00	0.00	
5,000.0	12.13	284.99	4,912.0	225.2	-841.3	-225.2	0.00	0.00	
5,100.0	12.13	284.99	5,009.8	230.6	-861.6	-230.6	0.00	0.00	
5,189.2	12.13	284.99	5,097.0	235.5	-879.7	-235.5	0.00	0.00	Shannon
5,200.0	12.13	284.99	5,107.6	236.1	-881.9	-236.1	0.00	0.00	
5,300.0	12.13	284.99	5,205.3	241.5	-902.2	-241.5	0.00	0.00	
5,400.0	12.13	284.99	5,303.1	246.9	-922.5	-246.9	0.00	0.00	
5,500.0	12.13	284.99	5,400.9	252.4	-942.8	-252.4	0.00	0.00	
5,600.0	12.13	284.99	5,498.6	257.8	-963.1	-257.8	0.00	0.00	
5,700.0	12.13	284.99	5,596.4	263.2	-983.4	-263.2	0.00	0.00	
5,800.0	12.13	284.99	5,694.2	268.7	-1,003.7	-268.7	0.00	0.00	
5,900.0	12.13	284.99	5,791.9	274.1	-1,024.0	-274.1	0.00	0.00	
6,000.0	12.13	284.99	5,889.7	279.5	-1,044.3	-279.5	0.00	0.00	
6,100.0	12.13	284.99	5,987.5	285.0	-1,064.6	-285.0	0.00	0.00	
6,200.0	12.13	284.99	6,085.3	290.4	-1,084.9	-290.4	0.00	0.00	
6,300.0	12.13	284.99	6,183.0	295.8	-1,105.2	-295.8	0.00	0.00	
6,400.0	12.13	284.99	6,280.8	301.3	-1,125.5	-301.3	0.00	0.00	
6,500.0	12.13	284.99	6,378.6	306.7	-1,145.7	-306.7	0.00	0.00	
6,600.0	12.13	284.99	6,476.3	312.1	-1,166.0	-312.1	0.00	0.00	
6,700.0	12.13	284.99	6,574.1	317.6	-1,186.3	-317.6	0.00	0.00	
6,800.0	12.13	284.99	6,671.9	323.0	-1,206.6	-323.0	0.00	0.00	
6,900.0	12.13	284.99	6,769.6	328.4	-1,226.9	-328.4	0.00	0.00	
7,000.0	12.13	284.99	6,867.4	333.9	-1,247.2	-333.9	0.00	0.00	
7,026.2	12.13	284.99	6,893.0	335.3	-1,252.5	-335.3	0.00	0.00	Teepee Buttes (*if present)
7,100.0	12.13	284.99	6,965.2	339.3	-1,267.5	-339.3	0.00	0.00	
7,167.0	12.13	284.99	7,030.7	342.9	-1,281.1	-342.9	0.00	0.00	Start 8° Build/Turn
7,200.0	11.74	272.32	7,063.0	344.0	-1,287.8	-344.0	8.00	-1.19	
7,250.0	12.24	253.13	7,111.9	342.6	-1,298.0	-342.6	8.00	1.01	
7,300.0	13.91	236.97	7,160.6	337.8	-1,308.1	-337.8	8.00	3.34	
7,350.0	16.39	224.90	7,208.9	329.5	-1,318.1	-329.5	8.00	4.96	
7,400.0	19.37	216.18	7,256.5	317.8	-1,328.0	-317.8	8.00	5.97	
7,450.0	22.66	209.81	7,303.1	302.8	-1,337.7	-302.8	8.00	6.58	
7,498.1	26.01	205.18	7,347.0	285.2	-1,346.8	-285.2	8.00	6.95	Sharon Springs
7,500.0	26.14	205.02	7,348.7	284.4	-1,347.1	-284.4	8.00	7.09	
7,550.0	29.74	201.30	7,392.8	262.9	-1,356.3	-262.9	8.00	7.20	
7,564.1	30.77	200.40	7,405.0	256.3	-1,358.8	-256.3	8.00	7.32	Niobrara
7,600.0	33.43	198.33	7,435.4	238.3	-1,365.1	-238.3	8.00	7.39	
7,650.0	37.17	195.89	7,476.2	210.7	-1,373.6	-210.7	8.00	7.49	
7,700.0	40.96	193.84	7,515.1	180.2	-1,381.6	-180.2	8.00	7.57	
7,701.2	41.05	193.79	7,516.0	179.4	-1,381.8	-179.4	8.00	7.61	B Chalk
7,736.5	43.74	192.53	7,542.0	156.3	-1,387.2	-156.3	8.00	7.63	B Marl
7,750.0	44.77	192.08	7,551.7	147.1	-1,389.3	-147.1	8.00	7.65	
7,800.0	48.61	190.54	7,586.0	111.4	-1,396.4	-111.4	8.00	7.68	
7,850.0	52.47	189.17	7,617.8	73.4	-1,403.0	-73.4	8.00	7.72	
7,862.0	53.40	188.87	7,625.0	63.9	-1,404.5	-63.9	8.00	7.74	C Chalk
7,900.0	56.34	187.94	7,646.9	33.2	-1,409.0	-33.2	8.00	7.75	
7,907.5	56.93	187.77	7,651.0	26.9	-1,409.9	-26.9	8.00	7.76	C Marl
7,950.0	60.23	186.82	7,673.1	-9.0	-1,414.5	9.0	8.00	7.77	
7,968.2	61.65	186.43	7,682.0	-24.9	-1,416.3	24.9	8.00	7.78	D Chalk
8,000.0	64.12	185.78	7,696.5	-53.0	-1,419.3	53.0	8.00	7.79	
8,050.0	68.02	184.81	7,716.7	-98.5	-1,423.5	98.5	8.00	7.80	
8,100.0	71.93	183.88	7,733.9	-145.3	-1,427.1	145.3	8.00	7.81	

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Well:	Morgan Hills 1B-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
8,117.2	73.27	183.58	7,739.0	-161.6	-1,428.1	161.6	8.00	7.82	Fort Hayes
8,150.0	75.84	183.00	7,747.7	-193.2	-1,429.9	193.2	8.00	7.82	
8,200.0	79.75	182.15	7,758.3	-242.0	-1,432.1	242.0	8.00	7.83	
8,203.9	80.05	182.09	7,759.0	-245.9	-1,432.3	245.9	8.00	7.83	Codell
8,250.0	83.66	181.32	7,765.5	-291.5	-1,433.6	291.5	8.00	7.83	
8,300.0	87.58	180.50	7,769.3	-341.3	-1,434.4	341.3	8.00	7.83	
8,330.9	90.00	180.00	7,770.0	-372.2	-1,434.6	372.2	8.00	7.83	LP @ 7770' TVD; 90°
8,400.0	90.00	180.00	7,770.0	-441.3	-1,434.6	441.3	0.00	0.00	
8,500.0	90.00	180.00	7,770.0	-541.3	-1,434.6	541.3	0.00	0.00	
8,600.0	90.00	180.00	7,770.0	-641.3	-1,434.6	641.3	0.00	0.00	
8,700.0	90.00	180.00	7,770.0	-741.3	-1,434.6	741.3	0.00	0.00	
8,800.0	90.00	180.00	7,770.0	-841.3	-1,434.6	841.3	0.00	0.00	
8,900.0	90.00	180.00	7,770.0	-941.3	-1,434.6	941.3	0.00	0.00	
9,000.0	90.00	180.00	7,770.0	-1,041.3	-1,434.6	1,041.3	0.00	0.00	
9,100.0	90.00	180.00	7,770.0	-1,141.3	-1,434.6	1,141.3	0.00	0.00	
9,200.0	90.00	180.00	7,770.0	-1,241.3	-1,434.6	1,241.3	0.00	0.00	
9,300.0	90.00	180.00	7,770.0	-1,341.3	-1,434.6	1,341.3	0.00	0.00	
9,400.0	90.00	180.00	7,770.0	-1,441.3	-1,434.6	1,441.3	0.00	0.00	
9,500.0	90.00	180.00	7,770.0	-1,541.3	-1,434.6	1,541.3	0.00	0.00	
9,600.0	90.00	180.00	7,770.0	-1,641.3	-1,434.6	1,641.3	0.00	0.00	
9,700.0	90.00	180.00	7,770.0	-1,741.3	-1,434.6	1,741.3	0.00	0.00	
9,800.0	90.00	180.00	7,770.0	-1,841.3	-1,434.6	1,841.3	0.00	0.00	
9,900.0	90.00	180.00	7,770.0	-1,941.3	-1,434.6	1,941.3	0.00	0.00	
10,000.0	90.00	180.00	7,770.0	-2,041.3	-1,434.6	2,041.3	0.00	0.00	
10,100.0	90.00	180.00	7,770.0	-2,141.3	-1,434.6	2,141.3	0.00	0.00	
10,200.0	90.00	180.00	7,770.0	-2,241.3	-1,434.6	2,241.3	0.00	0.00	
10,300.0	90.00	180.00	7,770.0	-2,341.3	-1,434.6	2,341.3	0.00	0.00	
10,400.0	90.00	180.00	7,770.0	-2,441.3	-1,434.6	2,441.3	0.00	0.00	
10,500.0	90.00	180.00	7,770.0	-2,541.3	-1,434.6	2,541.3	0.00	0.00	
10,600.0	90.00	180.00	7,770.0	-2,641.3	-1,434.6	2,641.3	0.00	0.00	
10,700.0	90.00	180.00	7,770.0	-2,741.3	-1,434.6	2,741.3	0.00	0.00	
10,800.0	90.00	180.00	7,770.0	-2,841.3	-1,434.6	2,841.3	0.00	0.00	
10,900.0	90.00	180.00	7,770.0	-2,941.3	-1,434.6	2,941.3	0.00	0.00	
11,000.0	90.00	180.00	7,770.0	-3,041.3	-1,434.6	3,041.3	0.00	0.00	
11,100.0	90.00	180.00	7,770.0	-3,141.3	-1,434.6	3,141.3	0.00	0.00	
11,200.0	90.00	180.00	7,770.0	-3,241.3	-1,434.6	3,241.3	0.00	0.00	
11,300.0	90.00	180.00	7,770.0	-3,341.3	-1,434.6	3,341.3	0.00	0.00	
11,400.0	90.00	180.00	7,770.0	-3,441.3	-1,434.6	3,441.3	0.00	0.00	
11,500.0	90.00	180.00	7,770.0	-3,541.3	-1,434.6	3,541.3	0.00	0.00	
11,600.0	90.00	180.00	7,770.0	-3,641.3	-1,434.6	3,641.3	0.00	0.00	
11,700.0	90.00	180.00	7,770.0	-3,741.3	-1,434.6	3,741.3	0.00	0.00	
11,800.0	90.00	180.00	7,770.0	-3,841.3	-1,434.6	3,841.3	0.00	0.00	
11,900.0	90.00	180.00	7,770.0	-3,941.3	-1,434.6	3,941.3	0.00	0.00	
12,000.0	90.00	180.00	7,770.0	-4,041.3	-1,434.6	4,041.3	0.00	0.00	
12,100.0	90.00	180.00	7,770.0	-4,141.3	-1,434.6	4,141.3	0.00	0.00	
12,200.0	90.00	180.00	7,770.0	-4,241.3	-1,434.6	4,241.3	0.00	0.00	
12,300.0	90.00	180.00	7,770.0	-4,341.3	-1,434.6	4,341.3	0.00	0.00	
12,400.0	90.00	180.00	7,770.0	-4,441.3	-1,434.6	4,441.3	0.00	0.00	
12,500.0	90.00	180.00	7,770.0	-4,541.3	-1,434.6	4,541.3	0.00	0.00	
12,600.0	90.00	180.00	7,770.0	-4,641.3	-1,434.6	4,641.3	0.00	0.00	
12,700.0	90.00	180.00	7,770.0	-4,741.3	-1,434.6	4,741.3	0.00	0.00	
12,800.0	90.00	180.00	7,770.0	-4,841.3	-1,434.6	4,841.3	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5036.0ft
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5036.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1B-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	-4,941.3	-1,434.6	4,941.3	0.00	0.00	
13,000.0	90.00	180.00	7,770.0	-5,041.3	-1,434.6	5,041.3	0.00	0.00	
13,100.0	90.00	180.00	7,770.0	-5,141.3	-1,434.6	5,141.3	0.00	0.00	
13,200.0	90.00	180.00	7,770.0	-5,241.3	-1,434.6	5,241.3	0.00	0.00	
13,300.0	90.00	180.00	7,770.0	-5,341.3	-1,434.6	5,341.3	0.00	0.00	
13,400.0	90.00	180.00	7,770.0	-5,441.3	-1,434.6	5,441.3	0.00	0.00	
13,500.0	90.00	180.00	7,770.0	-5,541.3	-1,434.6	5,541.3	0.00	0.00	
13,600.0	90.00	180.00	7,770.0	-5,641.3	-1,434.6	5,641.3	0.00	0.00	
13,700.0	90.00	180.00	7,770.0	-5,741.3	-1,434.6	5,741.3	0.00	0.00	
13,800.0	90.00	180.00	7,770.0	-5,841.3	-1,434.6	5,841.3	0.00	0.00	
13,900.0	90.00	180.00	7,770.0	-5,941.3	-1,434.6	5,941.3	0.00	0.00	
14,000.0	90.00	180.00	7,770.0	-6,041.3	-1,434.6	6,041.3	0.00	0.00	
14,100.0	90.00	180.00	7,770.0	-6,141.3	-1,434.6	6,141.3	0.00	0.00	
14,200.0	90.00	180.00	7,770.0	-6,241.3	-1,434.6	6,241.3	0.00	0.00	
14,300.0	90.00	180.00	7,770.0	-6,341.3	-1,434.6	6,341.3	0.00	0.00	
14,400.0	90.00	180.00	7,770.0	-6,441.3	-1,434.6	6,441.3	0.00	0.00	
14,500.0	90.00	180.00	7,770.0	-6,541.3	-1,434.6	6,541.3	0.00	0.00	
14,600.0	90.00	180.00	7,770.0	-6,641.3	-1,434.6	6,641.3	0.00	0.00	
14,700.0	90.00	180.00	7,770.0	-6,741.3	-1,434.6	6,741.3	0.00	0.00	
14,800.0	90.00	180.00	7,770.0	-6,841.3	-1,434.6	6,841.3	0.00	0.00	
14,900.0	90.00	180.00	7,770.0	-6,941.3	-1,434.6	6,941.3	0.00	0.00	
15,000.0	90.00	180.00	7,770.0	-7,041.3	-1,434.6	7,041.3	0.00	0.00	
15,100.0	90.00	180.00	7,770.0	-7,141.3	-1,434.6	7,141.3	0.00	0.00	
15,200.0	90.00	180.00	7,770.0	-7,241.3	-1,434.6	7,241.3	0.00	0.00	
15,300.0	90.00	180.00	7,770.0	-7,341.3	-1,434.6	7,341.3	0.00	0.00	
15,400.0	90.00	180.00	7,770.0	-7,441.3	-1,434.6	7,441.3	0.00	0.00	
15,500.0	90.00	180.00	7,770.0	-7,541.3	-1,434.6	7,541.3	0.00	0.00	
15,600.0	90.00	180.00	7,770.0	-7,641.3	-1,434.6	7,641.3	0.00	0.00	
15,700.0	90.00	180.00	7,770.0	-7,741.3	-1,434.6	7,741.3	0.00	0.00	
15,800.0	90.00	180.00	7,770.0	-7,841.3	-1,434.6	7,841.3	0.00	0.00	
15,900.0	90.00	180.00	7,770.0	-7,941.3	-1,434.6	7,941.3	0.00	0.00	
16,000.0	90.00	180.00	7,770.0	-8,041.3	-1,434.6	8,041.3	0.00	0.00	
16,100.0	90.00	180.00	7,770.0	-8,141.3	-1,434.6	8,141.3	0.00	0.00	
16,200.0	90.00	180.00	7,770.0	-8,241.3	-1,434.6	8,241.3	0.00	0.00	
16,300.0	90.00	180.00	7,770.0	-8,341.3	-1,434.6	8,341.3	0.00	0.00	
16,400.0	90.00	180.00	7,770.0	-8,441.3	-1,434.6	8,441.3	0.00	0.00	
16,500.0	90.00	180.00	7,770.0	-8,541.3	-1,434.6	8,541.3	0.00	0.00	
16,600.0	90.00	180.00	7,770.0	-8,641.3	-1,434.6	8,641.3	0.00	0.00	
16,700.0	90.00	180.00	7,770.0	-8,741.3	-1,434.6	8,741.3	0.00	0.00	
16,800.0	90.00	180.00	7,770.0	-8,841.3	-1,434.6	8,841.3	0.00	0.00	
16,900.0	90.00	180.00	7,770.0	-8,941.3	-1,434.6	8,941.3	0.00	0.00	
17,000.0	90.00	180.00	7,770.0	-9,041.3	-1,434.6	9,041.3	0.00	0.00	
17,100.0	90.00	180.00	7,770.0	-9,141.3	-1,434.6	9,141.3	0.00	0.00	
17,200.0	90.00	180.00	7,770.0	-9,241.3	-1,434.6	9,241.3	0.00	0.00	
17,300.0	90.00	180.00	7,770.0	-9,341.3	-1,434.6	9,341.3	0.00	0.00	
17,400.0	90.00	180.00	7,770.0	-9,441.3	-1,434.6	9,441.3	0.00	0.00	
17,500.0	90.00	180.00	7,770.0	-9,541.3	-1,434.6	9,541.3	0.00	0.00	
17,600.0	90.00	180.00	7,770.0	-9,641.3	-1,434.6	9,641.3	0.00	0.00	
17,700.0	90.00	180.00	7,770.0	-9,741.3	-1,434.6	9,741.3	0.00	0.00	
17,775.9	90.00	180.00	7,770.0	-9,817.2	-1,434.6	9,817.2	0.00	0.00	TD at 17775.9

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5036.0ft
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5036.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1B-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Morgan Hills 1B-7H-A16 - plan hits target center - Point	0.00	0.00	7,770.0	-9,817.2	-1,434.6	1,259,583.94	3,127,697.12	40.045038	-105.043908

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
400.0	400.0	Fox Hills - BASE		0.00	
4,882.3	4,797.0	Sussex		0.00	
5,189.2	5,097.0	Shannon		0.00	
7,026.2	6,893.0	Teepee Buttes (*if present)		0.00	
7,498.1	7,347.0	Sharon Springs		0.00	
7,564.1	7,405.0	Niobrara		0.00	
7,701.2	7,516.0	B Chalk		0.00	
7,736.5	7,542.0	B Marl		0.00	
7,862.0	7,625.0	C Chalk		0.00	
7,907.5	7,651.0	C Marl		0.00	
7,968.2	7,682.0	D Chalk		0.00	
8,117.2	7,739.0	Fort Hayes		0.00	
8,203.9	7,759.0	Codell		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
250.0	250.0	0.0	0.0	KOP @ 250' MD
1,462.7	1,453.7	33.1	-123.5	EOB; 12.13°
7,167.0	7,030.7	342.9	-1,281.1	Start 8° Build/Turn
8,330.9	7,770.0	-372.2	-1,434.6	LP @ 7770' TVD; 90°
17,775.9	7,770.0	-9,817.2	-1,434.6	TD at 17775.9

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)
Morgan Hills 1B-7H-A168
HZ
Plan #2

Anticollision Report

03 September, 2014

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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	17,775.9	Plan #2 (HZ)	Geolink MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)						
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN O	12,838.4	7,799.0	1,239.6	1,132.8	11.608	CC, ES
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN O	13,100.0	7,799.0	1,266.9	1,155.6	11.380	SF
ERIE CHAMPLIN B UNIT 1 - ENCANA WELL - NO SUR	14,139.7	7,804.0	901.0	776.4	7.228	CC, ES
ERIE CHAMPLIN B UNIT 1 - ENCANA WELL - NO SUR	14,300.0	7,804.0	915.2	787.7	7.180	SF
ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO SUR	17,166.9	7,799.0	867.4	689.9	4.887	CC, ES
ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO SUR	17,200.0	7,799.0	868.0	689.9	4.875	SF
Morgan Hills 1A-7H-A168 - HZ - Plan #2	200.0	200.0	10.1	9.4	15.434	CC, ES
Morgan Hills 1A-7H-A168 - HZ - Plan #2	17,775.9	17,589.7	346.6	91.1	1.357	Level 3, SF
Morgan Hills 1C-7H-A168 - HZ - Plan #2	250.0	249.0	10.1	9.3	12.212	CC, ES
Morgan Hills 1C-7H-A168 - HZ - Plan #2	17,775.9	17,488.1	345.9	90.5	1.354	Level 3, SF
Morgan Hills 1D-7H-A168 - HZ - Plan #2	250.0	249.0	19.9	19.0	24.073	CC, ES
Morgan Hills 1D-7H-A168 - HZ - Plan #2	17,775.9	17,694.8	500.0	151.0	1.433	Level 3, SF
Morgan Hills 1E-7H-A168 - HZ - Plan #2	250.0	249.0	29.9	29.1	36.276	CC, ES
Morgan Hills 1E-7H-A168 - HZ - Plan #2	17,775.9	17,430.0	787.2	454.3	2.365	SF
Morgan Hills 1F-7H-A168 - HZ - Plan #2	250.0	249.0	40.0	39.2	48.479	CC, ES
Morgan Hills 1F-7H-A168 - HZ - Plan #2	17,775.9	17,647.1	1,000.0	651.1	2.866	SF
Morgan Hills 1G-7H-A168 - HZ - Plan #2	250.0	249.0	50.1	49.3	60.683	CC, ES
Morgan Hills 1G-7H-A168 - HZ - Plan #2	17,775.9	17,403.2	1,272.8	929.8	3.711	SF
Morgan Hills 1H-7H-A168 - HZ - Plan #2	250.0	249.0	59.9	59.1	72.547	CC, ES
Morgan Hills 1H-7H-A168 - HZ - Plan #2	17,775.9	17,632.6	1,500.1	1,151.1	4.298	SF
Morgan Hills 1I-7H-A168 - HZ - Plan #2	250.0	249.0	70.0	69.1	84.751	CC, ES
Morgan Hills 1I-7H-A168 - HZ - Plan #2	900.0	894.9	109.7	106.6	35.446	SF
Sosa 21-18 - DD (MWD) - DD	13,436.0	7,882.5	1,167.2	1,050.4	9.993	CC, ES
Sosa 21-18 - DD (MWD) - DD	13,600.0	7,879.2	1,178.7	1,059.0	9.852	SF
Sosa 21-18 - DD (MWD) - Plan #2	13,443.9	7,893.2	1,156.0	1,039.1	9.892	CC, ES
Sosa 21-18 - DD (MWD) - Plan #2	13,600.0	7,893.2	1,166.5	1,046.9	9.755	SF
Sosa 22-18 - DD - DD	14,928.9	7,913.8	1,242.7	1,097.8	8.577	CC, ES
Sosa 22-18 - DD - DD	15,100.0	7,913.8	1,254.4	1,106.6	8.484	SF
Sosa 22-18 - DD - Plan #2	14,911.9	7,887.1	1,260.1	1,115.7	8.728	CC, ES
Sosa 22-18 - DD - Plan #2	15,100.0	7,887.1	1,274.1	1,126.4	8.629	SF
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	12,262.2	7,772.3	1,274.6	1,182.5	13.829	CC
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	12,300.0	7,772.2	1,275.2	1,182.4	13.738	ES
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	12,600.0	7,771.1	1,318.6	1,220.6	13.454	SF
THOMAS 33-7 (EXISTING) - ENCANA WELL - SURVEY	10,969.0	8,022.9	178.4	97.0	2.190	CC, ES, SF
WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SURVE	9,673.9	8,010.3	1,275.2	1,211.7	20.100	CC
WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SURVE	9,700.0	8,010.2	1,275.4	1,211.6	19.972	ES
WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SURVE	10,100.0	8,008.0	1,344.5	1,274.1	19.094	SF
WOOLLEY 4-0-7 (EXISTING) - ENCANA WELL - SURVE	7,800.3	7,699.6	980.1	948.5	31.084	CC, ES
WOOLLEY 4-0-7 (EXISTING) - ENCANA WELL - SURVE	7,900.0	7,757.9	985.3	953.4	30.841	SF
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SU	1,426.9	1,414.6	227.6	221.7	38.962	CC
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SU	1,462.7	1,449.7	227.7	221.7	37.709	ES
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SU	2,100.0	2,072.7	267.9	258.8	29.442	SF
WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA - NO S	9,594.3	7,774.0	1,140.7	1,093.7	24.291	CC
WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA - NO S	9,600.0	7,774.0	1,140.7	1,093.7	24.244	ES
WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA - NO S	10,100.0	7,774.0	1,247.8	1,192.5	22.600	SF
WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - NO SU	9,075.5	7,790.0	236.7	197.8	6.076	CC, ES
WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - NO SU	9,100.0	7,790.0	238.0	198.7	6.052	SF
Woolley-Becky 2F-7H-E168 - Hz - Plan #2	7,650.0	9,344.3	1,354.0	1,297.1	23.805	SF
Woolley-Becky 2F-7H-E168 - Hz - Plan #2	8,100.0	8,987.9	1,311.8	1,261.7	26.176	ES
Woolley-Becky 2F-7H-E168 - Hz - Plan #2	8,215.2	8,876.1	1,311.1	1,262.5	26.981	CC
Woolley-Becky 2G-7H-E168 - Hz - Plan #1	7,800.0	9,615.7	1,062.9	1,004.8	18.295	SF
Woolley-Becky 2G-7H-E168 - Hz - Plan #1	9,201.6	8,270.2	989.0	942.7	21.360	CC, ES
Woolley-Becky 2H-7H-E168 - Hz - Plan #2	9,385.8	8,090.3	578.9	535.0	13.201	CC, ES

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)						
Woolley-Becky 2H-7H-E168 - Hz - Plan #2	9,500.0	8,022.6	583.8	539.3	13.127	SF
Woolley-Sosa 2D-7H-E168 - HZ - Plan #1						Out of range
Woolley-Sosa 2E-7H-E168 - HZ - Plan #2						Out of range
Woolley-Sosa 2F-7H-E168 - HZ - Plan #1	9,892.1	8,211.9	1,410.3	1,357.9	26.876	CC
Woolley-Sosa 2F-7H-E168 - HZ - Plan #1	17,775.9	16,087.8	1,411.6	1,096.4	4.479	ES, SF
Woolley-Sosa 2G-7H-E168 - HZ - Plan #1	9,895.5	8,272.7	1,060.4	1,007.8	20.158	CC
Woolley-Sosa 2G-7H-E168 - HZ - Plan #1	17,775.9	16,148.7	1,061.7	746.5	3.369	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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) - BEARDEN 24-6 (EXISTING) - ENCANA WELL - P

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,000.0	7,770.0	7,799.0	7,726.0	78.1	19.0	90.00	-4,879.8	-2,674.2	1,496.5	1,404.2	92.30	16.214	
12,100.0	7,770.0	7,799.0	7,726.0	79.8	19.0	90.00	-4,879.8	-2,674.2	1,442.9	1,348.9	94.02	15.346	
12,200.0	7,770.0	7,799.0	7,726.0	81.4	19.0	90.00	-4,879.8	-2,674.2	1,394.4	1,298.6	95.75	14.563	
12,300.0	7,770.0	7,799.0	7,726.0	83.0	19.0	90.00	-4,879.8	-2,674.2	1,351.5	1,254.0	97.47	13.865	
12,400.0	7,770.0	7,799.0	7,726.0	84.7	19.0	90.00	-4,879.8	-2,674.2	1,314.9	1,215.7	99.20	13.254	
12,500.0	7,770.0	7,799.0	7,726.0	86.3	19.0	90.00	-4,879.8	-2,674.2	1,285.0	1,184.1	100.93	12.731	
12,600.0	7,770.0	7,799.0	7,726.0	88.0	19.0	90.00	-4,879.8	-2,674.2	1,262.3	1,159.7	102.66	12.296	
12,700.0	7,770.0	7,799.0	7,726.0	89.7	19.0	90.00	-4,879.8	-2,674.2	1,247.3	1,142.9	104.39	11.948	
12,800.0	7,770.0	7,799.0	7,726.0	91.3	19.0	90.00	-4,879.8	-2,674.2	1,240.2	1,134.1	106.13	11.686	
12,838.4	7,770.0	7,799.0	7,726.0	92.0	19.0	90.00	-4,879.8	-2,674.2	1,239.6	1,132.8	106.79	11.608	CC, ES
12,900.0	7,770.0	7,799.0	7,726.0	93.0	19.0	90.00	-4,879.8	-2,674.2	1,241.1	1,133.3	107.86	11.507	
13,000.0	7,770.0	7,799.0	7,726.0	94.7	19.0	90.00	-4,879.8	-2,674.2	1,250.1	1,140.5	109.59	11.407	
13,100.0	7,770.0	7,799.0	7,726.0	96.3	19.0	90.00	-4,879.8	-2,674.2	1,266.9	1,155.6	111.33	11.380	SF
13,200.0	7,770.0	7,799.0	7,726.0	98.0	19.0	90.00	-4,879.8	-2,674.2	1,291.3	1,178.2	113.06	11.421	
13,300.0	7,770.0	7,799.0	7,726.0	99.7	19.0	90.00	-4,879.8	-2,674.2	1,322.8	1,208.0	114.80	11.522	
13,400.0	7,770.0	7,799.0	7,726.0	101.4	19.0	90.00	-4,879.8	-2,674.2	1,360.9	1,244.3	116.54	11.678	
13,500.0	7,770.0	7,799.0	7,726.0	103.1	19.0	90.00	-4,879.8	-2,674.2	1,405.1	1,286.8	118.27	11.880	
13,600.0	7,770.0	7,799.0	7,726.0	104.7	19.0	90.00	-4,879.8	-2,674.2	1,454.9	1,334.8	120.01	12.123	
13,700.0	7,770.0	7,799.0	7,726.0	106.4	19.0	90.00	-4,879.8	-2,674.2	1,509.6	1,387.9	121.75	12.399	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,900.0	7,770.0	7,804.0	7,804.0	93.0	13.6	-90.00	-6,181.0	-533.5	1,532.6	1,429.5	103.12	14.862	
13,000.0	7,770.0	7,804.0	7,804.0	94.7	13.6	-90.00	-6,181.0	-533.5	1,452.9	1,348.0	104.86	13.856	
13,100.0	7,770.0	7,804.0	7,804.0	96.3	13.6	-90.00	-6,181.0	-533.5	1,375.8	1,269.2	106.59	12.908	
13,200.0	7,770.0	7,804.0	7,804.0	98.0	13.6	-90.00	-6,181.0	-533.5	1,301.9	1,193.6	108.33	12.018	
13,300.0	7,770.0	7,804.0	7,804.0	99.7	13.6	-90.00	-6,181.0	-533.5	1,231.7	1,121.6	110.06	11.191	
13,400.0	7,770.0	7,804.0	7,804.0	101.4	13.6	-90.00	-6,181.0	-533.5	1,165.8	1,054.0	111.80	10.428	
13,500.0	7,770.0	7,804.0	7,804.0	103.1	13.6	-90.00	-6,181.0	-533.5	1,105.0	991.5	113.54	9.733	
13,600.0	7,770.0	7,804.0	7,804.0	104.7	13.6	-90.00	-6,181.0	-533.5	1,050.3	935.0	115.27	9.112	
13,700.0	7,770.0	7,804.0	7,804.0	106.4	13.6	-90.00	-6,181.0	-533.5	1,002.6	885.6	117.01	8.568	
13,800.0	7,770.0	7,804.0	7,804.0	108.1	13.6	-90.00	-6,181.0	-533.5	962.9	844.2	118.75	8.109	
13,900.0	7,770.0	7,804.0	7,804.0	109.8	13.6	-90.00	-6,181.0	-533.5	932.4	811.9	120.49	7.738	
14,000.0	7,770.0	7,804.0	7,804.0	111.5	13.6	-90.00	-6,181.0	-533.5	911.8	789.6	122.23	7.460	
14,100.0	7,770.0	7,804.0	7,804.0	113.2	13.6	-90.00	-6,181.0	-533.5	901.9	777.9	123.97	7.275	
14,139.7	7,770.0	7,804.0	7,804.0	113.9	13.6	-90.00	-6,181.0	-533.5	901.0	776.4	124.66	7.228	CC, ES
14,200.0	7,770.0	7,804.0	7,804.0	114.9	13.6	-90.00	-6,181.0	-533.5	903.0	777.3	125.71	7.183	
14,300.0	7,770.0	7,804.0	7,804.0	116.6	13.6	-90.00	-6,181.0	-533.5	915.2	787.7	127.45	7.180	SF
14,400.0	7,770.0	7,804.0	7,804.0	118.3	13.6	-90.00	-6,181.0	-533.5	937.9	808.7	129.19	7.259	
14,500.0	7,770.0	7,804.0	7,804.0	120.0	13.6	-90.00	-6,181.0	-533.5	970.4	839.4	130.94	7.411	
14,600.0	7,770.0	7,804.0	7,804.0	121.7	13.6	-90.00	-6,181.0	-533.5	1,011.8	879.1	132.68	7.626	
14,700.0	7,770.0	7,804.0	7,804.0	123.4	13.6	-90.00	-6,181.0	-533.5	1,061.0	926.6	134.42	7.893	
14,800.0	7,770.0	7,804.0	7,804.0	125.1	13.6	-90.00	-6,181.0	-533.5	1,117.0	980.9	136.16	8.204	
14,900.0	7,770.0	7,804.0	7,804.0	126.8	13.6	-90.00	-6,181.0	-533.5	1,178.9	1,041.0	137.91	8.549	
15,000.0	7,770.0	7,804.0	7,804.0	128.5	13.6	-90.00	-6,181.0	-533.5	1,245.7	1,106.1	139.65	8.920	
15,100.0	7,770.0	7,804.0	7,804.0	130.2	13.6	-90.00	-6,181.0	-533.5	1,316.8	1,175.4	141.39	9.313	
15,200.0	7,770.0	7,804.0	7,804.0	132.0	13.6	-90.00	-6,181.0	-533.5	1,391.4	1,248.3	143.14	9.721	
15,300.0	7,770.0	7,804.0	7,804.0	133.7	13.6	-90.00	-6,181.0	-533.5	1,469.0	1,324.1	144.88	10.139	
15,400.0	7,770.0	7,804.0	7,804.0	135.4	13.6	-90.00	-6,181.0	-533.5	1,549.2	1,402.6	146.63	10.566	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
15,900.0	7,770.0	7,799.0	7,799.0	144.0	13.6	-90.00	-9,208.2	-567.2	1,535.3	1,380.0	155.35	9.883	
16,000.0	7,770.0	7,799.0	7,799.0	145.7	13.6	-90.00	-9,208.2	-567.2	1,453.9	1,296.8	157.09	9.255	
16,100.0	7,770.0	7,799.0	7,799.0	147.4	13.6	-90.00	-9,208.2	-567.2	1,375.0	1,216.1	158.84	8.656	
16,200.0	7,770.0	7,799.0	7,799.0	149.1	13.6	-90.00	-9,208.2	-567.2	1,298.9	1,138.3	160.58	8.089	
16,300.0	7,770.0	7,799.0	7,799.0	150.8	13.6	-90.00	-9,208.2	-567.2	1,226.3	1,064.0	162.33	7.554	
16,400.0	7,770.0	7,799.0	7,799.0	152.6	13.6	-90.00	-9,208.2	-567.2	1,157.8	993.7	164.08	7.056	
16,500.0	7,770.0	7,799.0	7,799.0	154.3	13.6	-90.00	-9,208.2	-567.2	1,094.1	928.3	165.82	6.598	
16,600.0	7,770.0	7,799.0	7,799.0	156.0	13.6	-90.00	-9,208.2	-567.2	1,036.2	868.6	167.57	6.184	
16,700.0	7,770.0	7,799.0	7,799.0	157.7	13.6	-90.00	-9,208.2	-567.2	985.0	815.7	169.32	5.818	
16,800.0	7,770.0	7,799.0	7,799.0	159.5	13.6	-90.00	-9,208.2	-567.2	941.8	770.7	171.07	5.505	
16,900.0	7,770.0	7,799.0	7,799.0	161.2	13.6	-90.00	-9,208.2	-567.2	907.5	734.7	172.81	5.251	
17,000.0	7,770.0	7,799.0	7,799.0	162.9	13.6	-90.00	-9,208.2	-567.2	883.3	708.7	174.56	5.060	
17,100.0	7,770.0	7,799.0	7,799.0	164.6	13.6	-90.00	-9,208.2	-567.2	869.9	693.6	176.31	4.934	
17,166.9	7,770.0	7,799.0	7,799.0	165.8	13.6	-90.00	-9,208.2	-567.2	867.4	689.9	177.48	4.887	CC, ES
17,200.0	7,770.0	7,799.0	7,799.0	166.4	13.6	-90.00	-9,208.2	-567.2	868.0	689.9	178.06	4.875	SF
17,300.0	7,770.0	7,799.0	7,799.0	168.1	13.6	-90.00	-9,208.2	-567.2	877.5	697.7	179.80	4.880	
17,400.0	7,770.0	7,799.0	7,799.0	169.8	13.6	-90.00	-9,208.2	-567.2	898.1	716.6	181.55	4.947	
17,500.0	7,770.0	7,799.0	7,799.0	171.6	13.6	-90.00	-9,208.2	-567.2	929.1	745.8	183.30	5.069	
17,600.0	7,770.0	7,799.0	7,799.0	173.3	13.6	-90.00	-9,208.2	-567.2	969.5	784.4	185.05	5.239	
17,700.0	7,770.0	7,799.0	7,799.0	175.0	13.6	-90.00	-9,208.2	-567.2	1,018.1	831.3	186.80	5.450	
17,775.9	7,770.0	7,799.0	7,799.0	176.3	13.6	-90.00	-9,208.2	-567.2	1,059.8	871.7	188.12	5.634	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance 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	-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	CC, ES
250.0	250.0	249.9	249.9	0.4	0.4	-89.73	0.0	-10.3	10.3	9.5	0.83	12.432	
300.0	300.0	299.8	299.8	0.5	0.5	-14.25	0.2	-10.9	10.7	9.7	1.00	10.698	
400.0	400.0	399.6	399.6	0.7	0.7	-13.64	0.8	-13.5	11.6	10.2	1.35	8.573	
500.0	499.9	499.4	499.3	0.9	0.9	-13.41	1.7	-17.7	12.5	10.8	1.70	7.326	
600.0	599.8	599.2	598.9	1.1	1.1	-13.47	3.1	-23.6	13.3	11.3	2.05	6.506	
700.0	699.5	699.0	698.3	1.3	1.3	-13.77	4.9	-31.2	14.2	11.8	2.40	5.926	
800.0	799.2	798.7	797.6	1.5	1.5	-14.27	7.0	-40.5	15.1	12.4	2.76	5.493	
900.0	898.6	898.4	896.7	1.7	1.8	-14.93	9.5	-51.5	16.0	12.9	3.11	5.156	
1,000.0	997.9	998.1	995.6	2.0	2.0	-15.73	12.4	-64.2	17.0	13.5	3.48	4.885	
1,100.0	1,096.9	1,097.8	1,094.2	2.3	2.3	-16.64	15.7	-78.5	17.9	14.1	3.85	4.659	
1,200.0	1,195.7	1,197.5	1,192.5	2.6	2.7	-17.64	19.4	-94.5	18.9	14.7	4.23	4.465	
1,300.0	1,294.1	1,297.2	1,290.5	2.9	3.0	-18.72	23.4	-112.2	19.9	15.2	4.63	4.293	
1,400.0	1,392.3	1,396.9	1,388.2	3.3	3.4	-19.87	27.9	-131.5	20.9	15.8	5.04	4.137	
1,462.7	1,453.7	1,459.3	1,449.2	3.5	3.6	-20.61	30.8	-144.4	21.5	16.2	5.32	4.045	
1,500.0	1,490.1	1,496.5	1,485.5	3.7	3.8	-20.95	32.7	-152.4	22.0	16.5	5.48	4.014	
1,600.0	1,587.9	1,596.1	1,582.3	4.0	4.2	-20.84	37.9	-175.0	24.5	18.6	5.90	4.146	
1,700.0	1,685.7	1,695.7	1,678.8	4.4	4.7	-19.70	43.4	-199.2	28.5	22.2	6.28	4.532	
1,800.0	1,783.4	1,795.6	1,775.5	4.8	5.2	-18.67	49.0	-223.7	32.8	26.2	6.66	4.932	
1,900.0	1,881.2	1,895.5	1,872.2	5.2	5.6	-17.87	54.7	-248.3	37.2	30.2	7.03	5.288	
2,000.0	1,979.0	1,995.4	1,968.9	5.6	6.1	-17.24	60.3	-272.8	41.6	34.1	7.41	5.608	
2,100.0	2,076.7	2,095.4	2,065.5	6.0	6.6	-16.74	65.9	-297.4	45.9	38.1	7.79	5.897	
2,200.0	2,174.5	2,195.3	2,162.2	6.4	7.0	-16.32	71.5	-321.9	50.3	42.1	8.17	6.158	
2,300.0	2,272.3	2,295.2	2,258.9	6.8	7.5	-15.96	77.2	-346.4	54.7	46.1	8.55	6.396	
2,400.0	2,370.0	2,395.1	2,355.6	7.3	8.0	-15.66	82.8	-371.0	59.1	50.1	8.93	6.614	
2,500.0	2,467.8	2,495.0	2,452.3	7.7	8.5	-15.40	88.4	-395.5	63.5	54.1	9.31	6.814	
2,600.0	2,565.6	2,594.9	2,548.9	8.1	8.9	-15.18	94.1	-420.1	67.8	58.1	9.69	6.998	
2,700.0	2,663.4	2,694.8	2,645.6	8.5	9.4	-14.98	99.7	-444.6	72.2	62.1	10.08	7.168	
2,800.0	2,761.1	2,794.7	2,742.3	8.9	9.9	-14.81	105.3	-469.2	76.6	66.2	10.46	7.325	
2,900.0	2,858.9	2,894.6	2,839.0	9.3	10.4	-14.65	111.0	-493.7	81.0	70.2	10.84	7.471	
3,000.0	2,956.7	2,994.5	2,935.6	9.7	10.9	-14.51	116.6	-518.2	85.4	74.2	11.22	7.608	
3,100.0	3,054.4	3,094.4	3,032.3	10.1	11.3	-14.38	122.2	-542.8	89.8	78.2	11.61	7.735	
3,200.0	3,152.2	3,194.3	3,129.0	10.5	11.8	-14.27	127.9	-567.3	94.2	82.2	11.99	7.854	
3,300.0	3,250.0	3,294.2	3,225.7	10.9	12.3	-14.16	133.5	-591.9	98.5	86.2	12.37	7.966	
3,400.0	3,347.7	3,394.1	3,322.4	11.3	12.8	-14.07	139.1	-616.4	102.9	90.2	12.75	8.071	
3,500.0	3,445.5	3,494.0	3,419.0	11.7	13.3	-13.98	144.8	-641.0	107.3	94.2	13.14	8.170	
3,600.0	3,543.3	3,593.9	3,515.7	12.2	13.8	-13.90	150.4	-665.5	111.7	98.2	13.52	8.263	
3,700.0	3,641.0	3,693.8	3,612.4	12.6	14.2	-13.82	156.0	-690.0	116.1	102.2	13.90	8.351	
3,800.0	3,738.8	3,793.7	3,709.1	13.0	14.7	-13.75	161.7	-714.6	120.5	106.2	14.29	8.434	
3,900.0	3,836.6	3,893.6	3,805.8	13.4	15.2	-13.69	167.3	-739.1	124.9	110.2	14.67	8.513	
4,000.0	3,934.3	3,993.5	3,902.4	13.8	15.7	-13.63	172.9	-763.7	129.3	114.2	15.05	8.588	
4,100.0	4,032.1	4,093.4	3,999.1	14.2	16.2	-13.57	178.5	-788.2	133.7	118.2	15.44	8.659	
4,200.0	4,129.9	4,193.3	4,095.8	14.6	16.6	-13.52	184.2	-812.8	138.1	122.2	15.82	8.727	
4,300.0	4,227.7	4,293.2	4,192.5	15.0	17.1	-13.47	189.8	-837.3	142.4	126.2	16.20	8.791	
4,400.0	4,325.4	4,393.1	4,289.1	15.4	17.6	-13.43	195.4	-861.8	146.8	130.2	16.59	8.853	
4,500.0	4,423.2	4,493.0	4,385.8	15.9	18.1	-13.38	201.1	-886.4	151.2	134.3	16.97	8.912	
4,600.0	4,521.0	4,592.9	4,482.5	16.3	18.6	-13.34	206.7	-910.9	155.6	138.3	17.35	8.968	
4,700.0	4,618.7	4,692.8	4,579.2	16.7	19.1	-13.30	212.3	-935.5	160.0	142.3	17.74	9.022	
4,800.0	4,716.5	4,792.7	4,675.9	17.1	19.5	-13.26	218.0	-960.0	164.4	146.3	18.12	9.073	
4,900.0	4,814.3	4,892.6	4,772.5	17.5	20.0	-13.23	223.6	-984.6	168.8	150.3	18.50	9.122	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,912.0	4,992.6	4,869.2	17.9	20.5	-13.20	229.2	-1,009.1	173.2	154.3	18.89	9.170	
5,100.0	5,009.8	5,092.5	4,965.9	18.3	21.0	-13.17	234.9	-1,033.6	177.6	158.3	19.27	9.215	
5,200.0	5,107.6	5,192.4	5,062.6	18.7	21.5	-13.14	240.5	-1,058.2	182.0	162.3	19.65	9.259	
5,300.0	5,205.3	5,292.3	5,159.2	19.2	22.0	-13.11	246.1	-1,082.7	186.3	166.3	20.04	9.300	
5,400.0	5,303.1	5,392.2	5,255.9	19.6	22.5	-13.08	251.8	-1,107.3	190.7	170.3	20.42	9.341	
5,500.0	5,400.9	5,492.1	5,352.6	20.0	22.9	-13.05	257.4	-1,131.8	195.1	174.3	20.80	9.380	
5,600.0	5,498.6	5,592.0	5,449.3	20.4	23.4	-13.03	263.0	-1,156.4	199.5	178.3	21.19	9.417	
5,700.0	5,596.4	5,691.9	5,546.0	20.8	23.9	-13.00	268.7	-1,180.9	203.9	182.3	21.57	9.453	
5,800.0	5,694.2	5,791.8	5,642.6	21.2	24.4	-12.98	274.3	-1,205.4	208.3	186.3	21.95	9.488	
5,900.0	5,791.9	5,891.7	5,739.3	21.6	24.9	-12.96	279.9	-1,230.0	212.7	190.4	22.34	9.522	
6,000.0	5,889.7	5,991.6	5,836.0	22.0	25.4	-12.94	285.5	-1,254.5	217.1	194.4	22.72	9.554	
6,100.0	5,987.5	6,091.5	5,932.7	22.4	25.8	-12.92	291.2	-1,279.1	221.5	198.4	23.10	9.586	
6,200.0	6,085.3	6,191.4	6,029.3	22.9	26.3	-12.90	296.8	-1,303.6	225.9	202.4	23.49	9.616	
6,300.0	6,183.0	6,291.3	6,126.0	23.3	26.8	-12.88	302.4	-1,328.2	230.3	206.4	23.87	9.646	
6,400.0	6,280.8	6,391.2	6,222.7	23.7	27.3	-12.86	308.1	-1,352.7	234.6	210.4	24.26	9.674	
6,500.0	6,378.6	6,491.1	6,319.4	24.1	27.8	-12.85	313.7	-1,377.2	239.0	214.4	24.64	9.702	
6,600.0	6,476.3	6,591.0	6,416.1	24.5	28.3	-12.83	319.3	-1,401.8	243.4	218.4	25.02	9.728	
6,700.0	6,574.1	6,690.9	6,512.7	24.9	28.7	-12.81	325.0	-1,426.3	247.8	222.4	25.41	9.754	
6,800.0	6,671.9	6,790.8	6,609.4	25.3	29.2	-12.80	330.6	-1,450.9	252.2	226.4	25.79	9.780	
6,900.0	6,769.6	6,890.7	6,706.1	25.7	29.7	-12.78	336.2	-1,475.4	256.6	230.4	26.17	9.804	
7,000.0	6,867.4	6,990.7	6,802.8	26.2	30.2	-12.77	341.8	-1,500.0	261.0	234.4	26.56	9.827	
7,100.0	6,965.2	7,091.0	6,899.9	26.6	30.6	-14.47	339.6	-1,524.6	265.3	237.8	27.47	9.656	
7,167.0	7,030.7	7,156.1	6,962.5	26.8	30.9	-17.13	330.6	-1,540.5	268.5	239.8	28.68	9.360	
7,200.0	7,063.0	7,187.5	6,992.2	27.0	31.0	-6.44	324.2	-1,548.0	270.4	240.9	29.47	9.176	
7,250.0	7,111.9	7,234.4	7,036.1	27.2	31.2	9.85	312.2	-1,559.2	273.7	243.1	30.63	8.937	
7,300.0	7,160.6	7,280.6	7,078.6	27.3	31.3	23.19	297.4	-1,570.0	277.4	245.7	31.70	8.750	
7,350.0	7,208.9	7,326.2	7,119.5	27.5	31.5	32.55	280.1	-1,580.4	281.5	248.8	32.65	8.621	
7,400.0	7,256.5	7,371.3	7,158.7	27.6	31.6	38.67	260.4	-1,590.3	285.8	252.4	33.42	8.552	
7,450.0	7,303.1	7,415.8	7,196.3	27.8	31.7	42.56	238.5	-1,599.9	290.3	256.4	33.98	8.543	
7,500.0	7,348.7	7,459.8	7,232.1	27.9	31.9	45.00	214.5	-1,608.9	295.0	260.7	34.33	8.595	
7,550.0	7,392.8	7,503.4	7,266.0	28.0	32.0	46.48	188.6	-1,617.5	299.8	265.4	34.44	8.706	
7,600.0	7,435.4	7,546.5	7,298.0	28.1	32.1	47.34	160.8	-1,625.7	304.6	270.3	34.31	8.877	
7,650.0	7,476.2	7,589.3	7,328.1	28.2	32.2	47.79	131.4	-1,633.3	309.3	275.4	33.96	9.109	
7,700.0	7,515.1	7,631.7	7,356.2	28.3	32.3	47.97	100.5	-1,640.4	314.0	280.6	33.40	9.401	
7,750.0	7,551.7	7,673.8	7,382.3	28.4	32.4	47.96	68.1	-1,647.1	318.4	285.8	32.65	9.753	
7,800.0	7,586.0	7,715.6	7,406.3	28.5	32.5	47.84	34.5	-1,653.2	322.7	291.0	31.69	10.182	
7,850.0	7,617.8	7,757.1	7,428.3	28.6	32.6	47.66	-0.3	-1,658.8	326.7	295.9	30.80	10.608	
7,900.0	7,646.9	7,800.0	7,448.9	28.7	32.8	47.41	-37.6	-1,664.0	330.5	300.7	29.73	11.116	
7,950.0	7,673.1	7,839.6	7,465.9	28.8	32.9	47.20	-73.0	-1,668.3	333.9	305.2	28.70	11.635	
8,000.0	7,696.5	7,880.5	7,481.5	29.0	33.0	46.97	-110.6	-1,672.3	336.9	309.2	27.72	12.153	
8,050.0	7,716.7	7,921.3	7,495.0	29.1	33.1	46.75	-148.9	-1,675.7	339.6	312.7	26.90	12.624	
8,100.0	7,733.9	7,961.9	7,506.3	29.3	33.3	46.56	-187.9	-1,678.5	341.8	315.5	26.30	12.996	
8,150.0	7,747.7	8,000.0	7,514.9	29.4	33.4	46.42	-224.9	-1,680.7	343.7	317.7	26.00	13.217	
8,200.0	7,758.3	8,042.9	7,522.3	29.6	33.6	46.29	-267.1	-1,682.6	345.1	319.0	26.07	13.235	
8,250.0	7,765.5	8,083.3	7,527.0	29.8	33.7	46.21	-307.2	-1,683.8	346.0	319.5	26.53	13.041	
8,300.0	7,769.3	8,123.7	7,529.5	30.0	33.9	46.17	-347.5	-1,684.5	346.5	319.1	27.39	12.651	
8,330.9	7,770.0	8,149.7	7,530.0	30.2	34.0	46.17	-373.6	-1,684.6	346.6	318.5	28.11	12.328	
8,348.8	7,770.0	8,166.3	7,530.0	30.3	34.0	46.17	-390.1	-1,684.6	346.6	318.2	28.34	12.230	
8,400.0	7,770.0	8,217.5	7,530.0	30.5	34.3	46.17	-441.3	-1,684.6	346.6	317.5	29.02	11.942	
8,500.0	7,770.0	8,317.5	7,530.0	31.1	34.8	46.17	-541.3	-1,684.6	346.6	316.1	30.47	11.374	
8,600.0	7,770.0	8,417.5	7,530.0	31.8	35.4	46.17	-641.3	-1,684.6	346.6	314.5	32.06	10.811	
8,700.0	7,770.0	8,517.5	7,530.0	32.5	36.0	46.17	-741.3	-1,684.6	346.6	312.8	33.76	10.265	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,800.0	7,770.0	8,617.5	7,530.0	33.3	36.8	46.17	-841.3	-1,684.6	346.6	311.0	35.57	9.744	
8,900.0	7,770.0	8,717.5	7,530.0	34.2	37.6	46.17	-941.3	-1,684.6	346.6	309.1	37.46	9.252	
9,000.0	7,770.0	8,817.5	7,530.0	35.2	38.4	46.17	-1,041.3	-1,684.6	346.6	307.1	39.42	8.791	
9,100.0	7,770.0	8,917.5	7,530.0	36.2	39.3	46.17	-1,141.3	-1,684.6	346.6	305.1	41.45	8.360	
9,200.0	7,770.0	9,017.5	7,530.0	37.3	40.3	46.17	-1,241.3	-1,684.6	346.6	303.0	43.54	7.960	
9,300.0	7,770.0	9,117.5	7,530.0	38.4	41.3	46.17	-1,341.3	-1,684.6	346.6	300.9	45.66	7.589	
9,400.0	7,770.0	9,217.5	7,530.0	39.6	42.4	46.17	-1,441.3	-1,684.6	346.6	298.7	47.84	7.245	
9,500.0	7,770.0	9,317.5	7,530.0	40.8	43.5	46.17	-1,541.3	-1,684.6	346.6	296.5	50.04	6.926	
9,600.0	7,770.0	9,417.5	7,530.0	42.0	44.7	46.17	-1,641.3	-1,684.6	346.6	294.3	52.28	6.629	
9,700.0	7,770.0	9,517.5	7,530.0	43.3	45.9	46.17	-1,741.3	-1,684.6	346.6	292.0	54.54	6.354	
9,800.0	7,770.0	9,617.5	7,530.0	44.6	47.1	46.17	-1,841.3	-1,684.6	346.6	289.7	56.83	6.098	
9,900.0	7,770.0	9,717.5	7,530.0	46.0	48.4	46.17	-1,941.3	-1,684.6	346.6	287.4	59.14	5.860	
10,000.0	7,770.0	9,817.5	7,530.0	47.4	49.7	46.17	-2,041.3	-1,684.6	346.6	285.1	61.46	5.638	
10,100.0	7,770.0	9,917.5	7,530.0	48.7	51.0	46.17	-2,141.3	-1,684.6	346.6	282.8	63.81	5.431	
10,200.0	7,770.0	10,017.5	7,530.0	50.2	52.4	46.17	-2,241.3	-1,684.6	346.6	280.4	66.17	5.238	
10,300.0	7,770.0	10,117.5	7,530.0	51.6	53.8	46.17	-2,341.3	-1,684.6	346.6	278.0	68.54	5.056	
10,400.0	7,770.0	10,217.5	7,530.0	53.1	55.2	46.17	-2,441.3	-1,684.6	346.6	275.6	70.92	4.887	
10,500.0	7,770.0	10,317.5	7,530.0	54.6	56.6	46.17	-2,541.3	-1,684.6	346.6	273.2	73.32	4.727	
10,600.0	7,770.0	10,417.5	7,530.0	56.1	58.0	46.17	-2,641.3	-1,684.6	346.6	270.8	75.72	4.577	
10,700.0	7,770.0	10,517.5	7,530.0	57.6	59.5	46.17	-2,741.3	-1,684.6	346.6	268.4	78.13	4.435	
10,800.0	7,770.0	10,617.5	7,530.0	59.1	61.0	46.17	-2,841.3	-1,684.6	346.6	266.0	80.56	4.302	
10,900.0	7,770.0	10,717.5	7,530.0	60.6	62.4	46.17	-2,941.3	-1,684.6	346.6	263.6	82.99	4.176	
11,000.0	7,770.0	10,817.5	7,530.0	62.2	63.9	46.17	-3,041.3	-1,684.6	346.6	261.1	85.42	4.057	
11,100.0	7,770.0	10,917.5	7,530.0	63.7	65.5	46.17	-3,141.3	-1,684.6	346.6	258.7	87.86	3.944	
11,200.0	7,770.0	11,017.5	7,530.0	65.3	67.0	46.17	-3,241.3	-1,684.6	346.6	256.3	90.31	3.837	
11,300.0	7,770.0	11,117.5	7,530.0	66.9	68.5	46.17	-3,341.3	-1,684.6	346.6	253.8	92.76	3.736	
11,400.0	7,770.0	11,217.5	7,530.0	68.5	70.1	46.17	-3,441.3	-1,684.6	346.6	251.3	95.22	3.640	
11,500.0	7,770.0	11,317.5	7,530.0	70.1	71.6	46.17	-3,541.3	-1,684.6	346.6	248.9	97.68	3.548	
11,600.0	7,770.0	11,417.5	7,530.0	71.7	73.2	46.17	-3,641.3	-1,684.6	346.6	246.4	100.15	3.460	
11,700.0	7,770.0	11,517.5	7,530.0	73.3	74.8	46.17	-3,741.3	-1,684.6	346.6	243.9	102.62	3.377	
11,800.0	7,770.0	11,617.5	7,530.0	74.9	76.3	46.17	-3,841.3	-1,684.6	346.6	241.5	105.09	3.298	
11,900.0	7,770.0	11,717.5	7,530.0	76.5	77.9	46.17	-3,941.3	-1,684.6	346.6	239.0	107.57	3.222	
12,000.0	7,770.0	11,817.5	7,530.0	78.1	79.5	46.17	-4,041.3	-1,684.6	346.6	236.5	110.05	3.149	
12,100.0	7,770.0	11,917.5	7,530.0	79.8	81.1	46.17	-4,141.3	-1,684.6	346.6	234.0	112.54	3.080	
12,200.0	7,770.0	12,017.5	7,530.0	81.4	82.7	46.17	-4,241.3	-1,684.6	346.6	231.5	115.02	3.013	
12,300.0	7,770.0	12,117.5	7,530.0	83.0	84.4	46.17	-4,341.3	-1,684.6	346.6	229.1	117.51	2.949	
12,400.0	7,770.0	12,217.5	7,530.0	84.7	86.0	46.17	-4,441.3	-1,684.6	346.6	226.6	120.00	2.888	
12,500.0	7,770.0	12,317.5	7,530.0	86.3	87.6	46.17	-4,541.3	-1,684.6	346.6	224.1	122.49	2.829	
12,600.0	7,770.0	12,417.5	7,530.0	88.0	89.2	46.17	-4,641.3	-1,684.6	346.6	221.6	124.99	2.773	
12,700.0	7,770.0	12,517.5	7,530.0	89.7	90.9	46.17	-4,741.3	-1,684.6	346.6	219.1	127.49	2.718	
12,800.0	7,770.0	12,617.5	7,530.0	91.3	92.5	46.17	-4,841.3	-1,684.6	346.6	216.6	129.98	2.666	
12,900.0	7,770.0	12,717.5	7,530.0	93.0	94.2	46.17	-4,941.3	-1,684.6	346.6	214.1	132.49	2.616	
13,000.0	7,770.0	12,817.5	7,530.0	94.7	95.8	46.17	-5,041.3	-1,684.6	346.6	211.6	134.99	2.567	
13,100.0	7,770.0	12,917.5	7,530.0	96.3	97.5	46.17	-5,141.3	-1,684.6	346.6	209.1	137.49	2.521	
13,200.0	7,770.0	13,017.5	7,530.0	98.0	99.1	46.17	-5,241.3	-1,684.6	346.6	206.6	140.00	2.475	
13,300.0	7,770.0	13,117.5	7,530.0	99.7	100.8	46.17	-5,341.3	-1,684.6	346.6	204.1	142.50	2.432	
13,400.0	7,770.0	13,217.5	7,530.0	101.4	102.4	46.17	-5,441.3	-1,684.6	346.6	201.6	145.01	2.390	
13,500.0	7,770.0	13,317.5	7,530.0	103.1	104.1	46.17	-5,541.3	-1,684.6	346.6	199.0	147.52	2.349	
13,600.0	7,770.0	13,417.5	7,530.0	104.7	105.8	46.17	-5,641.3	-1,684.6	346.6	196.5	150.03	2.310	
13,700.0	7,770.0	13,517.5	7,530.0	106.4	107.4	46.17	-5,741.3	-1,684.6	346.6	194.0	152.54	2.272	
13,800.0	7,770.0	13,617.5	7,530.0	108.1	109.1	46.17	-5,841.3	-1,684.6	346.6	191.5	155.06	2.235	
13,900.0	7,770.0	13,717.5	7,530.0	109.8	110.8	46.17	-5,941.3	-1,684.6	346.6	189.0	157.57	2.199	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,000.0	7,770.0	13,817.5	7,530.0	111.5	112.5	46.17	-6,041.3	-1,684.6	346.6	186.5	160.09	2.165	
14,100.0	7,770.0	13,917.5	7,530.0	113.2	114.1	46.17	-6,141.3	-1,684.6	346.6	184.0	162.60	2.131	
14,200.0	7,770.0	14,017.5	7,530.0	114.9	115.8	46.17	-6,241.3	-1,684.6	346.6	181.4	165.12	2.099	
14,300.0	7,770.0	14,117.5	7,530.0	116.6	117.5	46.17	-6,341.3	-1,684.6	346.6	178.9	167.64	2.067	
14,400.0	7,770.0	14,217.5	7,530.0	118.3	119.2	46.17	-6,441.3	-1,684.6	346.6	176.4	170.15	2.037	
14,500.0	7,770.0	14,317.5	7,530.0	120.0	120.9	46.17	-6,541.3	-1,684.6	346.6	173.9	172.67	2.007	
14,600.0	7,770.0	14,417.5	7,530.0	121.7	122.6	46.17	-6,641.3	-1,684.6	346.6	171.4	175.19	1.978	
14,700.0	7,770.0	14,517.5	7,530.0	123.4	124.3	46.17	-6,741.3	-1,684.6	346.6	168.8	177.71	1.950	
14,800.0	7,770.0	14,617.5	7,530.0	125.1	126.0	46.17	-6,841.3	-1,684.6	346.6	166.3	180.23	1.923	
14,900.0	7,770.0	14,717.5	7,530.0	126.8	127.7	46.17	-6,941.3	-1,684.6	346.6	163.8	182.76	1.896	
15,000.0	7,770.0	14,817.5	7,530.0	128.5	129.4	46.17	-7,041.3	-1,684.6	346.6	161.3	185.28	1.870	
15,100.0	7,770.0	14,917.5	7,530.0	130.2	131.1	46.17	-7,141.3	-1,684.6	346.6	158.8	187.80	1.845	
15,200.0	7,770.0	15,017.5	7,530.0	132.0	132.8	46.17	-7,241.3	-1,684.6	346.6	156.2	190.33	1.821	
15,300.0	7,770.0	15,117.5	7,530.0	133.7	134.5	46.17	-7,341.3	-1,684.6	346.6	153.7	192.85	1.797	
15,400.0	7,770.0	15,217.5	7,530.0	135.4	136.2	46.17	-7,441.3	-1,684.6	346.6	151.2	195.38	1.774	
15,500.0	7,770.0	15,317.5	7,530.0	137.1	137.9	46.17	-7,541.3	-1,684.6	346.6	148.7	197.90	1.751	
15,600.0	7,770.0	15,417.5	7,530.0	138.8	139.6	46.17	-7,641.3	-1,684.6	346.6	146.1	200.43	1.729	
15,700.0	7,770.0	15,517.5	7,530.0	140.5	141.3	46.17	-7,741.3	-1,684.6	346.6	143.6	202.95	1.708	
15,800.0	7,770.0	15,617.5	7,530.0	142.2	143.0	46.17	-7,841.3	-1,684.6	346.6	141.1	205.48	1.687	
15,900.0	7,770.0	15,717.5	7,530.0	144.0	144.7	46.17	-7,941.3	-1,684.6	346.6	138.6	208.01	1.666	
16,000.0	7,770.0	15,817.5	7,530.0	145.7	146.4	46.17	-8,041.3	-1,684.6	346.6	136.0	210.54	1.646	
16,100.0	7,770.0	15,917.5	7,530.0	147.4	148.1	46.17	-8,141.3	-1,684.6	346.6	133.5	213.06	1.627	
16,200.0	7,770.0	16,017.5	7,530.0	149.1	149.8	46.17	-8,241.3	-1,684.6	346.6	131.0	215.59	1.607	
16,300.0	7,770.0	16,117.5	7,530.0	150.8	151.5	46.17	-8,341.3	-1,684.6	346.6	128.4	218.12	1.589	
16,400.0	7,770.0	16,217.5	7,530.0	152.6	153.3	46.17	-8,441.3	-1,684.6	346.6	125.9	220.65	1.571	
16,500.0	7,770.0	16,317.5	7,530.0	154.3	155.0	46.17	-8,541.3	-1,684.6	346.6	123.4	223.18	1.553	
16,600.0	7,770.0	16,417.5	7,530.0	156.0	156.7	46.17	-8,641.3	-1,684.6	346.6	120.9	225.71	1.535	
16,700.0	7,770.0	16,517.5	7,530.0	157.7	158.4	46.17	-8,741.3	-1,684.6	346.6	118.3	228.24	1.518	
16,800.0	7,770.0	16,617.5	7,530.0	159.5	160.1	46.17	-8,841.3	-1,684.6	346.6	115.8	230.77	1.502	
16,900.0	7,770.0	16,717.5	7,530.0	161.2	161.8	46.17	-8,941.3	-1,684.6	346.6	113.3	233.30	1.485	Level 3
17,000.0	7,770.0	16,817.5	7,530.0	162.9	163.6	46.17	-9,041.3	-1,684.6	346.6	110.7	235.83	1.470	Level 3
17,100.0	7,770.0	16,917.5	7,530.0	164.6	165.3	46.17	-9,141.3	-1,684.6	346.6	108.2	238.37	1.454	Level 3
17,200.0	7,770.0	17,017.5	7,530.0	166.4	167.0	46.17	-9,241.3	-1,684.6	346.6	105.7	240.90	1.439	Level 3
17,300.0	7,770.0	17,117.5	7,530.0	168.1	168.7	46.17	-9,341.3	-1,684.6	346.6	103.1	243.43	1.424	Level 3
17,400.0	7,770.0	17,217.5	7,530.0	169.8	170.4	46.17	-9,441.3	-1,684.6	346.6	100.6	245.96	1.409	Level 3
17,500.0	7,770.0	17,317.5	7,530.0	171.6	172.2	46.17	-9,541.3	-1,684.6	346.6	98.1	248.49	1.395	Level 3
17,600.0	7,770.0	17,417.5	7,530.0	173.3	173.9	46.17	-9,641.3	-1,684.6	346.6	95.5	251.03	1.381	Level 3
17,700.0	7,770.0	17,517.5	7,530.0	175.0	175.6	46.17	-9,741.3	-1,684.6	346.6	93.0	253.56	1.367	Level 3
17,743.8	7,770.0	17,561.3	7,530.0	175.8	176.4	46.17	-9,785.1	-1,684.6	346.6	91.9	254.67	1.361	Level 3
17,775.9	7,770.0	17,589.7	7,530.0	176.3	176.9	46.17	-9,813.6	-1,684.6	346.6	91.1	255.44	1.357	Level 3, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	92.07	-0.4	10.1	10.1				
100.0	100.0	99.0	99.0	0.2	0.2	92.07	-0.4	10.1	10.1	9.8	0.30	33.364	
200.0	200.0	199.0	199.0	0.3	0.3	92.07	-0.4	10.1	10.1	9.4	0.65	15.486	
250.0	250.0	249.0	249.0	0.4	0.4	92.07	-0.4	10.1	10.1	9.3	0.83	12.212	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	167.36	-0.4	10.1	10.3	9.3	1.00	10.294	
400.0	400.0	399.2	399.2	0.7	0.7	168.08	-0.1	9.3	11.2	9.8	1.35	8.282	
500.0	499.9	499.4	499.3	0.9	0.9	168.18	0.7	6.8	12.1	10.4	1.70	7.111	
600.0	599.8	599.6	599.4	1.1	1.0	167.79	2.1	2.7	13.0	11.0	2.05	6.349	
700.0	699.5	699.8	699.5	1.3	1.2	167.00	4.1	-3.1	14.0	11.6	2.40	5.815	
800.0	799.2	800.0	799.4	1.5	1.4	165.90	6.6	-10.6	14.9	12.2	2.76	5.421	
900.0	898.6	900.3	899.2	1.7	1.7	164.55	9.7	-19.7	16.0	12.8	3.12	5.119	
1,000.0	997.9	1,000.5	998.8	2.0	1.9	163.00	13.3	-30.5	17.0	13.5	3.49	4.878	
1,100.0	1,096.9	1,100.8	1,098.2	2.3	2.2	161.29	17.5	-42.9	18.1	14.2	3.87	4.678	
1,200.0	1,195.7	1,201.1	1,197.4	2.6	2.5	159.48	22.2	-56.9	19.3	15.0	4.28	4.505	
1,300.0	1,294.1	1,301.4	1,296.3	2.9	2.8	157.58	27.5	-72.6	20.5	15.8	4.71	4.349	
1,400.0	1,392.3	1,401.5	1,394.8	3.3	3.1	156.40	33.2	-89.3	22.3	17.2	5.15	4.334	
1,462.7	1,453.7	1,464.1	1,456.5	3.5	3.4	156.60	36.7	-99.8	24.3	18.9	5.41	4.486	
1,500.0	1,490.1	1,501.4	1,493.2	3.7	3.5	156.89	38.8	-106.0	25.6	20.1	5.56	4.606	
1,600.0	1,587.9	1,601.3	1,591.5	4.0	3.8	157.53	44.4	-122.8	29.3	23.3	5.97	4.897	
1,700.0	1,685.7	1,701.3	1,689.9	4.4	4.2	158.03	50.1	-139.5	32.9	26.5	6.39	5.150	
1,800.0	1,783.4	1,801.2	1,788.3	4.8	4.5	158.44	55.7	-156.2	36.5	29.7	6.80	5.372	
1,900.0	1,881.2	1,901.1	1,886.6	5.2	4.8	158.76	61.3	-172.9	40.2	33.0	7.21	5.568	
2,000.0	1,979.0	2,001.1	1,985.0	5.6	5.2	159.04	67.0	-189.6	43.8	36.2	7.63	5.743	
2,100.0	2,076.7	2,101.0	2,083.4	6.0	5.5	159.27	72.6	-206.3	47.4	39.4	8.04	5.899	
2,200.0	2,174.5	2,200.9	2,181.7	6.4	5.9	159.47	78.2	-223.0	51.1	42.6	8.46	6.040	
2,300.0	2,272.3	2,300.9	2,280.1	6.8	6.2	159.64	83.9	-239.7	54.7	45.9	8.87	6.168	
2,400.0	2,370.0	2,400.8	2,378.5	7.3	6.6	159.79	89.5	-256.4	58.4	49.1	9.29	6.284	
2,500.0	2,467.8	2,500.7	2,476.8	7.7	7.0	159.93	95.1	-273.1	62.0	52.3	9.71	6.390	
2,600.0	2,565.6	2,600.7	2,575.2	8.1	7.3	160.05	100.8	-289.8	65.7	55.5	10.12	6.487	
2,700.0	2,663.4	2,700.6	2,673.6	8.5	7.7	160.15	106.4	-306.5	69.3	58.8	10.54	6.576	
2,800.0	2,761.1	2,800.5	2,771.9	8.9	8.0	160.25	112.0	-323.2	72.9	62.0	10.96	6.658	
2,900.0	2,858.9	2,900.5	2,870.3	9.3	8.4	160.33	117.6	-339.9	76.6	65.2	11.37	6.735	
3,000.0	2,956.7	3,000.4	2,968.7	9.7	8.7	160.41	123.3	-356.6	80.2	68.4	11.79	6.806	
3,100.0	3,054.4	3,100.3	3,067.0	10.1	9.1	160.48	128.9	-373.3	83.9	71.7	12.21	6.872	
3,200.0	3,152.2	3,200.3	3,165.4	10.5	9.4	160.55	134.5	-390.0	87.5	74.9	12.62	6.933	
3,300.0	3,250.0	3,300.2	3,263.8	10.9	9.8	160.61	140.2	-406.7	91.2	78.1	13.04	6.991	
3,400.0	3,347.7	3,400.1	3,362.1	11.3	10.1	160.67	145.8	-423.4	94.8	81.4	13.46	7.045	
3,500.0	3,445.5	3,500.1	3,460.5	11.7	10.5	160.72	151.4	-440.1	98.5	84.6	13.88	7.095	
3,600.0	3,543.3	3,600.0	3,558.9	12.2	10.8	160.77	157.1	-456.8	102.1	87.8	14.29	7.143	
3,700.0	3,641.0	3,699.9	3,657.2	12.6	11.2	160.81	162.7	-473.5	105.7	91.0	14.71	7.188	
3,800.0	3,738.8	3,799.9	3,755.6	13.0	11.6	160.85	168.3	-490.2	109.4	94.3	15.13	7.230	
3,900.0	3,836.6	3,899.8	3,854.0	13.4	11.9	160.89	174.0	-506.9	113.0	97.5	15.55	7.270	
4,000.0	3,934.3	3,999.7	3,952.3	13.8	12.3	160.93	179.6	-523.6	116.7	100.7	15.96	7.308	
4,100.0	4,032.1	4,099.7	4,050.7	14.2	12.6	160.96	185.2	-540.3	120.3	103.9	16.38	7.344	
4,200.0	4,129.9	4,199.6	4,149.1	14.6	13.0	161.00	190.9	-557.0	124.0	107.2	16.80	7.379	
4,300.0	4,227.7	4,299.5	4,247.4	15.0	13.3	161.03	196.5	-573.7	127.6	110.4	17.22	7.411	
4,400.0	4,325.4	4,399.5	4,345.8	15.4	13.7	161.05	202.1	-590.4	131.3	113.6	17.64	7.442	
4,500.0	4,423.2	4,499.4	4,444.2	15.9	14.1	161.08	207.8	-607.1	134.9	116.8	18.05	7.472	
4,600.0	4,521.0	4,599.3	4,542.5	16.3	14.4	161.11	213.4	-623.8	138.5	120.1	18.47	7.500	
4,700.0	4,618.7	4,699.3	4,640.9	16.7	14.8	161.13	219.0	-640.5	142.2	123.3	18.89	7.527	
4,800.0	4,716.5	4,799.2	4,739.3	17.1	15.1	161.16	224.7	-657.2	145.8	126.5	19.31	7.553	
4,900.0	4,814.3	4,899.1	4,837.6	17.5	15.5	161.18	230.3	-673.9	149.5	129.8	19.73	7.577	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,912.0	4,999.1	4,936.0	17.9	15.8	161.20	235.9	-690.7	153.1	133.0	20.15	7.601	
5,100.0	5,009.8	5,099.0	5,034.4	18.3	16.2	161.22	241.6	-707.4	156.8	136.2	20.56	7.624	
5,200.0	5,107.6	5,198.9	5,132.7	18.7	16.5	161.24	247.2	-724.1	160.4	139.4	20.98	7.645	
5,300.0	5,205.3	5,298.9	5,231.1	19.2	16.9	161.26	252.8	-740.8	164.1	142.7	21.40	7.666	
5,400.0	5,303.1	5,398.8	5,329.5	19.6	17.3	161.27	258.5	-757.5	167.7	145.9	21.82	7.686	
5,500.0	5,400.9	5,498.7	5,427.8	20.0	17.6	161.29	264.1	-774.2	171.4	149.1	22.24	7.706	
5,600.0	5,498.6	5,598.7	5,526.2	20.4	18.0	161.31	269.7	-790.9	175.0	152.3	22.66	7.724	
5,700.0	5,596.4	5,698.6	5,624.6	20.8	18.3	161.32	275.4	-807.6	178.6	155.6	23.07	7.742	
5,800.0	5,694.2	5,798.5	5,722.9	21.2	18.7	161.34	281.0	-824.3	182.3	158.8	23.49	7.759	
5,900.0	5,791.9	5,898.5	5,821.3	21.6	19.0	161.35	286.6	-841.0	185.9	162.0	23.91	7.776	
6,000.0	5,889.7	5,998.4	5,919.7	22.0	19.4	161.37	292.3	-857.7	189.6	165.2	24.33	7.792	
6,100.0	5,987.5	6,098.3	6,018.0	22.4	19.8	161.38	297.9	-874.4	193.2	168.5	24.75	7.808	
6,200.0	6,085.3	6,198.3	6,116.4	22.9	20.1	161.39	303.5	-891.1	196.9	171.7	25.17	7.823	
6,300.0	6,183.0	6,298.2	6,214.8	23.3	20.5	161.40	309.1	-907.8	200.5	174.9	25.58	7.837	
6,400.0	6,280.8	6,398.1	6,313.1	23.7	20.8	161.42	314.8	-924.5	204.2	178.2	26.00	7.851	
6,500.0	6,378.6	6,498.1	6,411.5	24.1	21.2	161.43	320.4	-941.2	207.8	181.4	26.42	7.865	
6,600.0	6,476.3	6,598.0	6,509.9	24.5	21.5	161.44	326.0	-957.9	211.4	184.6	26.84	7.878	
6,700.0	6,574.1	6,697.9	6,608.2	24.9	21.9	161.45	331.7	-974.6	215.1	187.8	27.26	7.891	
6,800.0	6,671.9	6,797.9	6,706.6	25.3	22.3	161.46	337.3	-991.3	218.7	191.1	27.68	7.903	
6,900.0	6,769.6	6,898.3	6,805.4	25.7	22.6	161.55	342.7	-1,008.1	222.4	194.3	28.06	7.924	
7,000.0	6,867.4	6,999.3	6,904.8	26.2	22.9	164.11	338.3	-1,025.0	225.5	198.0	27.50	8.201	
7,100.0	6,965.2	7,095.7	6,998.3	26.6	23.1	169.75	320.9	-1,041.0	229.8	203.7	26.13	8.795	
7,167.0	7,030.7	7,156.3	7,055.4	26.8	23.2	174.72	303.5	-1,050.8	235.0	209.7	25.38	9.262	
7,200.0	7,063.0	7,185.0	7,082.0	27.0	23.3	-170.07	293.6	-1,055.4	238.7	213.4	25.21	9.466	
7,250.0	7,111.9	7,227.8	7,120.7	27.2	23.4	-147.21	276.8	-1,062.1	245.1	219.7	25.37	9.662	
7,300.0	7,160.6	7,269.7	7,157.8	27.3	23.4	-127.66	258.1	-1,068.5	252.5	226.6	25.94	9.736	
7,350.0	7,208.9	7,311.0	7,193.0	27.5	23.5	-112.48	237.6	-1,074.6	260.7	233.9	26.79	9.732	
7,400.0	7,256.5	7,350.0	7,225.2	27.6	23.5	-101.04	216.4	-1,080.2	269.5	241.7	27.75	9.711	
7,450.0	7,303.1	7,391.6	7,258.3	27.8	23.6	-92.04	191.8	-1,085.9	278.6	249.8	28.81	9.670	
7,500.0	7,348.7	7,431.0	7,288.3	27.9	23.6	-84.98	166.7	-1,091.1	288.0	258.2	29.77	9.672	
7,550.0	7,392.8	7,470.0	7,316.5	28.0	23.7	-79.25	140.3	-1,096.1	297.3	266.7	30.60	9.718	
7,600.0	7,435.4	7,508.5	7,343.0	28.1	23.8	-74.52	112.7	-1,100.7	306.6	275.4	31.24	9.814	
7,650.0	7,476.2	7,550.0	7,369.8	28.2	23.8	-70.44	81.5	-1,105.5	315.7	284.0	31.75	9.944	
7,700.0	7,515.1	7,584.4	7,390.7	28.3	23.9	-67.19	54.4	-1,109.2	324.5	292.5	31.97	10.150	
7,750.0	7,551.7	7,621.8	7,411.9	28.4	24.0	-64.33	23.8	-1,112.9	332.9	300.8	32.06	10.382	
7,800.0	7,586.0	7,659.0	7,431.4	28.5	24.1	-61.87	-7.7	-1,116.4	340.8	308.9	31.87	10.693	
7,850.0	7,617.8	7,700.0	7,451.0	28.6	24.2	-59.69	-43.5	-1,119.9	348.2	316.6	31.65	11.002	
7,900.0	7,646.9	7,732.5	7,465.1	28.7	24.3	-57.98	-72.7	-1,122.5	355.0	323.8	31.16	11.392	
7,950.0	7,673.1	7,769.0	7,479.3	28.8	24.4	-56.45	-106.2	-1,125.1	361.1	330.5	30.61	11.795	
8,000.0	7,696.5	7,800.0	7,490.1	29.0	24.5	-55.22	-135.2	-1,127.0	366.6	336.6	29.92	12.252	
8,050.0	7,716.7	7,841.4	7,502.5	29.1	24.6	-54.08	-174.7	-1,129.4	371.2	342.0	29.27	12.684	
8,100.0	7,733.9	7,877.5	7,511.4	29.3	24.8	-53.20	-209.5	-1,131.1	375.2	346.7	28.53	13.150	
8,150.0	7,747.7	7,913.4	7,518.6	29.4	25.0	-52.51	-244.7	-1,132.5	378.4	350.6	27.80	13.611	
8,200.0	7,758.3	7,950.0	7,524.2	29.6	25.1	-51.99	-280.9	-1,133.6	380.8	353.7	27.11	14.048	
8,250.0	7,765.5	7,985.0	7,527.8	29.8	25.3	-51.64	-315.7	-1,134.4	382.3	355.9	26.47	14.445	
8,300.0	7,769.3	8,020.8	7,529.7	30.0	25.5	-51.45	-351.4	-1,134.9	383.1	357.2	25.93	14.775	
8,330.9	7,770.0	8,043.2	7,530.0	30.2	25.6	-51.41	-373.8	-1,135.1	383.2	357.5	25.65	14.936	
8,400.0	7,770.0	8,112.3	7,530.0	30.5	26.0	-51.37	-442.9	-1,135.5	382.9	356.1	26.76	14.310	
8,500.0	7,770.0	8,212.3	7,530.0	31.1	26.7	-51.32	-542.9	-1,136.0	382.5	354.0	28.49	13.424	
8,600.0	7,770.0	8,312.3	7,530.0	31.8	27.5	-51.28	-642.9	-1,136.5	382.1	351.7	30.37	12.579	
8,700.0	7,770.0	8,412.3	7,530.0	32.5	28.4	-51.23	-742.9	-1,137.0	381.6	349.3	32.37	11.789	
8,800.0	7,770.0	8,512.3	7,530.0	33.3	29.3	-51.18	-842.9	-1,137.5	381.2	346.8	34.47	11.059	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,900.0	7,770.0	8,612.3	7,530.0	34.2	30.3	-51.13	-942.9	-1,138.1	380.8	344.2	36.65	10.390	
9,000.0	7,770.0	8,712.3	7,530.0	35.2	31.4	-51.08	-1,042.9	-1,138.6	380.4	341.5	38.90	9.780	
9,100.0	7,770.0	8,812.3	7,530.0	36.2	32.6	-51.03	-1,142.9	-1,139.1	380.0	338.8	41.20	9.224	
9,200.0	7,770.0	8,912.3	7,530.0	37.3	33.8	-50.98	-1,242.8	-1,139.6	379.6	336.1	43.55	8.718	
9,300.0	7,770.0	9,012.3	7,530.0	38.4	35.0	-50.93	-1,342.8	-1,140.2	379.2	333.3	45.93	8.256	
9,400.0	7,770.0	9,112.3	7,530.0	39.6	36.3	-50.88	-1,442.8	-1,140.7	378.8	330.5	48.34	7.836	
9,500.0	7,770.0	9,212.3	7,530.0	40.8	37.6	-50.83	-1,542.8	-1,141.2	378.4	327.6	50.78	7.451	
9,600.0	7,770.0	9,312.3	7,530.0	42.0	39.0	-50.78	-1,642.8	-1,141.7	378.0	324.7	53.25	7.099	
9,700.0	7,770.0	9,412.3	7,530.0	43.3	40.4	-50.73	-1,742.8	-1,142.3	377.6	321.8	55.73	6.775	
9,800.0	7,770.0	9,512.3	7,530.0	44.6	41.8	-50.68	-1,842.8	-1,142.8	377.2	318.9	58.23	6.478	
9,900.0	7,770.0	9,612.3	7,530.0	46.0	43.2	-50.63	-1,942.8	-1,143.3	376.8	316.0	60.74	6.203	
10,000.0	7,770.0	9,712.3	7,530.0	47.4	44.7	-50.58	-2,042.8	-1,143.8	376.4	313.1	63.26	5.950	
10,100.0	7,770.0	9,812.3	7,530.0	48.7	46.2	-50.53	-2,142.8	-1,144.4	376.0	310.2	65.79	5.715	
10,200.0	7,770.0	9,912.3	7,530.0	50.2	47.7	-50.48	-2,242.8	-1,144.9	375.6	307.2	68.32	5.497	
10,300.0	7,770.0	10,012.3	7,530.0	51.6	49.2	-50.43	-2,342.8	-1,145.4	375.2	304.3	70.87	5.294	
10,400.0	7,770.0	10,112.3	7,530.0	53.1	50.8	-50.37	-2,442.8	-1,145.9	374.7	301.3	73.42	5.104	
10,500.0	7,770.0	10,212.2	7,530.0	54.6	52.3	-50.32	-2,542.8	-1,146.4	374.3	298.4	75.97	4.927	
10,600.0	7,770.0	10,312.2	7,530.0	56.1	53.9	-50.27	-2,642.8	-1,147.0	373.9	295.4	78.53	4.762	
10,700.0	7,770.0	10,412.2	7,530.0	57.6	55.4	-50.22	-2,742.8	-1,147.5	373.5	292.4	81.09	4.606	
10,800.0	7,770.0	10,512.2	7,530.0	59.1	57.0	-50.17	-2,842.8	-1,148.0	373.1	289.5	83.65	4.461	
10,900.0	7,770.0	10,612.2	7,530.0	60.6	58.6	-50.12	-2,942.8	-1,148.5	372.7	286.5	86.22	4.323	
11,000.0	7,770.0	10,712.2	7,530.0	62.2	60.2	-50.07	-3,042.8	-1,149.1	372.3	283.6	88.78	4.194	
11,100.0	7,770.0	10,812.2	7,530.0	63.7	61.8	-50.01	-3,142.8	-1,149.6	371.9	280.6	91.35	4.072	
11,200.0	7,770.0	10,912.2	7,530.0	65.3	63.4	-49.96	-3,242.8	-1,150.1	371.5	277.6	93.91	3.956	
11,300.0	7,770.0	11,012.2	7,530.0	66.9	65.1	-49.91	-3,342.8	-1,150.6	371.1	274.7	96.48	3.847	
11,400.0	7,770.0	11,112.2	7,530.0	68.5	66.7	-49.86	-3,442.8	-1,151.2	370.7	271.7	99.04	3.743	
11,500.0	7,770.0	11,212.2	7,530.0	70.1	68.3	-49.81	-3,542.8	-1,151.7	370.3	268.7	101.61	3.645	
11,600.0	7,770.0	11,312.2	7,530.0	71.7	70.0	-49.75	-3,642.8	-1,152.2	369.9	265.8	104.17	3.551	
11,700.0	7,770.0	11,412.2	7,530.0	73.3	71.6	-49.70	-3,742.8	-1,152.7	369.5	262.8	106.73	3.462	
11,800.0	7,770.0	11,512.2	7,530.0	74.9	73.3	-49.65	-3,842.8	-1,153.3	369.1	259.8	109.29	3.378	
11,900.0	7,770.0	11,612.2	7,530.0	76.5	75.0	-49.60	-3,942.8	-1,153.8	368.7	256.9	111.85	3.297	
12,000.0	7,770.0	11,712.2	7,530.0	78.1	76.6	-49.54	-4,042.8	-1,154.3	368.3	253.9	114.40	3.220	
12,100.0	7,770.0	11,812.2	7,530.0	79.8	78.3	-49.49	-4,142.8	-1,154.8	367.9	251.0	116.95	3.146	
12,200.0	7,770.0	11,912.2	7,530.0	81.4	80.0	-49.44	-4,242.8	-1,155.3	367.5	248.0	119.50	3.076	
12,300.0	7,770.0	12,012.2	7,530.0	83.0	81.6	-49.38	-4,342.8	-1,155.9	367.1	245.1	122.05	3.008	
12,400.0	7,770.0	12,112.2	7,530.0	84.7	83.3	-49.33	-4,442.8	-1,156.4	366.7	242.1	124.60	2.943	
12,500.0	7,770.0	12,212.2	7,530.0	86.3	85.0	-49.28	-4,542.8	-1,156.9	366.3	239.2	127.14	2.881	
12,600.0	7,770.0	12,312.2	7,530.0	88.0	86.7	-49.22	-4,642.8	-1,157.4	365.9	236.3	129.68	2.822	
12,700.0	7,770.0	12,412.2	7,530.0	89.7	88.4	-49.17	-4,742.8	-1,158.0	365.6	233.3	132.22	2.765	
12,800.0	7,770.0	12,512.2	7,530.0	91.3	90.0	-49.12	-4,842.7	-1,158.5	365.2	230.4	134.75	2.710	
12,900.0	7,770.0	12,612.2	7,530.0	93.0	91.7	-49.06	-4,942.7	-1,159.0	364.8	227.5	137.28	2.657	
13,000.0	7,770.0	12,712.2	7,530.0	94.7	93.4	-49.01	-5,042.7	-1,159.5	364.4	224.6	139.81	2.606	
13,100.0	7,770.0	12,812.2	7,530.0	96.3	95.1	-48.96	-5,142.7	-1,160.1	364.0	221.6	142.33	2.557	
13,200.0	7,770.0	12,912.2	7,530.0	98.0	96.8	-48.90	-5,242.7	-1,160.6	363.6	218.7	144.85	2.510	
13,300.0	7,770.0	13,012.2	7,530.0	99.7	98.5	-48.85	-5,342.7	-1,161.1	363.2	215.8	147.37	2.465	
13,400.0	7,770.0	13,112.2	7,530.0	101.4	100.2	-48.79	-5,442.7	-1,161.6	362.8	212.9	149.88	2.421	
13,500.0	7,770.0	13,212.2	7,530.0	103.1	101.9	-48.74	-5,542.7	-1,162.2	362.4	210.0	152.39	2.378	
13,600.0	7,770.0	13,312.2	7,530.0	104.7	103.6	-48.68	-5,642.7	-1,162.7	362.0	207.1	154.89	2.337	
13,700.0	7,770.0	13,412.2	7,530.0	106.4	105.3	-48.63	-5,742.7	-1,163.2	361.6	204.2	157.39	2.298	
13,800.0	7,770.0	13,512.2	7,530.0	108.1	107.0	-48.57	-5,842.7	-1,163.7	361.2	201.3	159.89	2.259	
13,900.0	7,770.0	13,612.2	7,530.0	109.8	108.8	-48.52	-5,942.7	-1,164.2	360.8	198.4	162.38	2.222	
14,000.0	7,770.0	13,712.2	7,530.0	111.5	110.5	-48.46	-6,042.7	-1,164.8	360.4	195.6	164.87	2.186	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,100.0	7,770.0	13,812.2	7,530.0	113.2	112.2	-48.41	-6,142.7	-1,165.3	360.0	192.7	167.36	2.151	
14,200.0	7,770.0	13,912.2	7,530.0	114.9	113.9	-48.35	-6,242.7	-1,165.8	359.6	189.8	169.84	2.118	
14,300.0	7,770.0	14,012.2	7,530.0	116.6	115.6	-48.30	-6,342.7	-1,166.3	359.3	186.9	172.31	2.085	
14,400.0	7,770.0	14,112.2	7,530.0	118.3	117.3	-48.24	-6,442.7	-1,166.9	358.9	184.1	174.78	2.053	
14,500.0	7,770.0	14,212.2	7,530.0	120.0	119.0	-48.19	-6,542.7	-1,167.4	358.5	181.2	177.25	2.022	
14,600.0	7,770.0	14,312.2	7,530.0	121.7	120.8	-48.13	-6,642.7	-1,167.9	358.1	178.4	179.71	1.993	
14,700.0	7,770.0	14,412.2	7,530.0	123.4	122.5	-48.07	-6,742.7	-1,168.4	357.7	175.5	182.17	1.963	
14,800.0	7,770.0	14,512.2	7,530.0	125.1	124.2	-48.02	-6,842.7	-1,169.0	357.3	172.7	184.63	1.935	
14,900.0	7,770.0	14,612.2	7,530.0	126.8	125.9	-47.96	-6,942.7	-1,169.5	356.9	169.8	187.08	1.908	
15,000.0	7,770.0	14,712.2	7,530.0	128.5	127.6	-47.91	-7,042.7	-1,170.0	356.5	167.0	189.52	1.881	
15,100.0	7,770.0	14,812.2	7,530.0	130.2	129.4	-47.85	-7,142.7	-1,170.5	356.1	164.2	191.96	1.855	
15,200.0	7,770.0	14,912.2	7,530.0	132.0	131.1	-47.79	-7,242.7	-1,171.1	355.8	161.4	194.40	1.830	
15,300.0	7,770.0	15,012.2	7,530.0	133.7	132.8	-47.74	-7,342.7	-1,171.6	355.4	158.5	196.83	1.805	
15,400.0	7,770.0	15,112.2	7,530.0	135.4	134.5	-47.68	-7,442.7	-1,172.1	355.0	155.7	199.26	1.782	
15,500.0	7,770.0	15,212.2	7,530.0	137.1	136.3	-47.62	-7,542.7	-1,172.6	354.6	152.9	201.68	1.758	
15,600.0	7,770.0	15,312.2	7,530.0	138.8	138.0	-47.56	-7,642.7	-1,173.1	354.2	150.1	204.09	1.735	
15,700.0	7,770.0	15,412.2	7,530.0	140.5	139.7	-47.51	-7,742.7	-1,173.7	353.8	147.3	206.51	1.713	
15,800.0	7,770.0	15,512.2	7,530.0	142.2	141.5	-47.45	-7,842.7	-1,174.2	353.4	144.5	208.91	1.692	
15,900.0	7,770.0	15,612.2	7,530.0	144.0	143.2	-47.39	-7,942.7	-1,174.7	353.0	141.7	211.32	1.671	
16,000.0	7,770.0	15,712.2	7,530.0	145.7	144.9	-47.34	-8,042.7	-1,175.2	352.7	138.9	213.71	1.650	
16,100.0	7,770.0	15,812.2	7,530.0	147.4	146.6	-47.28	-8,142.7	-1,175.8	352.3	136.2	216.10	1.630	
16,200.0	7,770.0	15,912.2	7,530.0	149.1	148.4	-47.22	-8,242.7	-1,176.3	351.9	133.4	218.49	1.611	
16,300.0	7,770.0	16,012.2	7,530.0	150.8	150.1	-47.16	-8,342.7	-1,176.8	351.5	130.6	220.87	1.591	
16,400.0	7,770.0	16,112.2	7,530.0	152.6	151.8	-47.10	-8,442.7	-1,177.3	351.1	127.9	223.25	1.573	
16,500.0	7,770.0	16,212.2	7,530.0	154.3	153.6	-47.05	-8,542.6	-1,177.9	350.7	125.1	225.62	1.555	
16,600.0	7,770.0	16,312.2	7,530.0	156.0	155.3	-46.99	-8,642.6	-1,178.4	350.4	122.4	227.99	1.537	
16,700.0	7,770.0	16,412.2	7,530.0	157.7	157.0	-46.93	-8,742.6	-1,178.9	350.0	119.6	230.35	1.519	
16,800.0	7,770.0	16,512.2	7,530.0	159.5	158.8	-46.87	-8,842.6	-1,179.4	349.6	116.9	232.71	1.502	
16,900.0	7,770.0	16,612.2	7,530.0	161.2	160.5	-46.81	-8,942.6	-1,180.0	349.2	114.2	235.06	1.486	Level 3
17,000.0	7,770.0	16,712.2	7,530.0	162.9	162.2	-46.75	-9,042.6	-1,180.5	348.8	111.4	237.40	1.469	Level 3
17,100.0	7,770.0	16,812.2	7,530.0	164.6	164.0	-46.69	-9,142.6	-1,181.0	348.4	108.7	239.74	1.453	Level 3
17,200.0	7,770.0	16,912.2	7,530.0	166.4	165.7	-46.63	-9,242.6	-1,181.5	348.1	106.0	242.08	1.438	Level 3
17,300.0	7,770.0	17,012.2	7,530.0	168.1	167.4	-46.57	-9,342.6	-1,182.0	347.7	103.3	244.41	1.423	Level 3
17,400.0	7,770.0	17,112.2	7,530.0	169.8	169.2	-46.52	-9,442.6	-1,182.6	347.3	100.6	246.73	1.408	Level 3
17,500.0	7,770.0	17,212.2	7,530.0	171.6	170.9	-46.46	-9,542.6	-1,183.1	346.9	97.9	249.05	1.393	Level 3
17,600.0	7,770.0	17,312.2	7,530.0	173.3	172.6	-46.40	-9,642.6	-1,183.6	346.5	95.2	251.36	1.379	Level 3
17,700.0	7,770.0	17,412.2	7,530.0	175.0	174.4	-46.34	-9,742.6	-1,184.1	346.2	92.5	253.67	1.365	Level 3
17,775.9	7,770.0	17,488.1	7,530.0	176.3	175.7	-46.29	-9,818.5	-1,184.5	345.9	90.5	255.42	1.354	Level 3, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 1D-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	91.05	-0.4	19.9	19.9				
100.0	100.0	99.0	99.0	0.2	0.2	91.05	-0.4	19.9	19.9	19.6	0.30	65.769	
200.0	200.0	199.0	199.0	0.3	0.3	91.05	-0.4	19.9	19.9	19.2	0.65	30.527	
250.0	250.0	249.0	249.0	0.4	0.4	91.05	-0.4	19.9	19.9	19.0	0.83	24.073	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	166.21	-0.4	19.9	20.1	19.1	1.00	20.084	
400.0	400.0	399.2	399.2	0.7	0.7	167.12	-0.3	19.7	21.6	20.2	1.35	15.998	
500.0	499.9	499.5	499.5	0.9	0.9	167.59	0.4	18.1	23.4	21.7	1.70	13.748	
600.0	599.8	599.9	599.8	1.1	1.0	167.53	1.7	14.8	25.2	23.1	2.05	12.287	
700.0	699.5	700.3	700.1	1.3	1.2	167.04	3.6	9.9	27.1	24.7	2.40	11.266	
800.0	799.2	800.8	800.3	1.5	1.4	166.22	6.2	3.4	29.0	26.2	2.76	10.514	
900.0	898.6	901.2	900.4	1.7	1.6	165.13	9.5	-4.7	31.0	27.9	3.12	9.938	
1,000.0	997.9	1,001.7	1,000.3	2.0	1.9	163.82	13.4	-14.5	33.0	29.6	3.49	9.479	
1,100.0	1,096.9	1,102.2	1,100.1	2.3	2.1	162.34	18.0	-25.9	35.2	31.3	3.87	9.100	
1,200.0	1,195.7	1,202.7	1,199.5	2.6	2.4	160.74	23.2	-38.9	37.4	33.2	4.26	8.781	
1,300.0	1,294.1	1,302.6	1,298.4	2.9	2.7	159.81	28.6	-52.4	40.8	36.2	4.67	8.747	
1,400.0	1,392.3	1,402.5	1,397.2	3.3	3.0	159.79	34.0	-65.8	45.9	40.8	5.07	9.050	
1,462.7	1,453.7	1,465.1	1,459.1	3.5	3.2	160.13	37.4	-74.3	49.8	44.5	5.31	9.383	
1,500.0	1,490.1	1,502.3	1,496.0	3.7	3.3	160.39	39.4	-79.3	52.4	46.9	5.46	9.601	
1,600.0	1,587.9	1,602.0	1,594.7	4.0	3.6	160.98	44.8	-92.8	59.3	53.4	5.85	10.133	
1,700.0	1,685.7	1,701.8	1,693.4	4.4	3.9	161.44	50.2	-106.2	66.2	59.9	6.24	10.597	
1,800.0	1,783.4	1,801.6	1,792.1	4.8	4.2	161.82	55.6	-119.7	73.1	66.4	6.64	11.006	
1,900.0	1,881.2	1,901.3	1,890.8	5.2	4.5	162.13	61.0	-133.1	79.9	72.9	7.03	11.370	
2,000.0	1,979.0	2,001.1	1,989.5	5.6	4.8	162.40	66.4	-146.6	86.8	79.4	7.43	11.694	
2,100.0	2,076.7	2,100.8	2,088.2	6.0	5.1	162.62	71.8	-160.0	93.7	85.9	7.82	11.986	
2,200.0	2,174.5	2,200.6	2,186.9	6.4	5.4	162.81	77.1	-173.5	100.6	92.4	8.21	12.250	
2,300.0	2,272.3	2,300.4	2,285.6	6.8	5.7	162.98	82.5	-186.9	107.5	98.9	8.61	12.489	
2,400.0	2,370.0	2,400.1	2,384.3	7.3	6.0	163.13	87.9	-200.4	114.4	105.4	9.00	12.707	
2,500.0	2,467.8	2,499.9	2,483.0	7.7	6.3	163.26	93.3	-213.8	121.3	111.9	9.40	12.907	
2,600.0	2,565.6	2,599.7	2,581.7	8.1	6.6	163.38	98.7	-227.3	128.2	118.4	9.79	13.091	
2,700.0	2,663.4	2,699.4	2,680.4	8.5	6.9	163.48	104.1	-240.8	135.1	124.9	10.19	13.260	
2,800.0	2,761.1	2,799.2	2,779.1	8.9	7.2	163.58	109.5	-254.2	142.0	131.4	10.58	13.416	
2,900.0	2,858.9	2,898.9	2,877.8	9.3	7.5	163.67	114.9	-267.7	148.9	137.9	10.98	13.562	
3,000.0	2,956.7	2,998.7	2,976.5	9.7	7.8	163.74	120.3	-281.1	155.8	144.4	11.38	13.697	
3,100.0	3,054.4	3,098.5	3,075.2	10.1	8.1	163.82	125.7	-294.6	162.7	150.9	11.77	13.823	
3,200.0	3,152.2	3,198.2	3,173.9	10.5	8.4	163.88	131.1	-308.0	169.6	157.4	12.17	13.940	
3,300.0	3,250.0	3,298.0	3,272.6	10.9	8.7	163.94	136.5	-321.5	176.5	163.9	12.56	14.051	
3,400.0	3,347.7	3,397.7	3,371.3	11.3	9.0	164.00	141.9	-334.9	183.4	170.4	12.96	14.154	
3,500.0	3,445.5	3,497.5	3,470.0	11.7	9.4	164.05	147.3	-348.4	190.3	177.0	13.35	14.252	
3,600.0	3,543.3	3,597.3	3,568.7	12.2	9.7	164.10	152.7	-361.8	197.2	183.5	13.75	14.343	
3,700.0	3,641.0	3,697.0	3,667.4	12.6	10.0	164.15	158.0	-375.3	204.1	190.0	14.14	14.430	
3,800.0	3,738.8	3,796.8	3,766.1	13.0	10.3	164.19	163.4	-388.8	211.0	196.5	14.54	14.512	
3,900.0	3,836.6	3,896.6	3,864.8	13.4	10.6	164.23	168.8	-402.2	217.9	203.0	14.94	14.589	
4,000.0	3,934.3	3,996.3	3,963.5	13.8	10.9	164.26	174.2	-415.7	224.8	209.5	15.33	14.662	
4,100.0	4,032.1	4,096.1	4,062.2	14.2	11.2	164.30	179.6	-429.1	231.7	216.0	15.73	14.732	
4,200.0	4,129.9	4,195.8	4,160.9	14.6	11.5	164.33	185.0	-442.6	238.6	222.5	16.12	14.798	
4,300.0	4,227.7	4,295.6	4,259.6	15.0	11.8	164.36	190.4	-456.0	245.5	229.0	16.52	14.862	
4,400.0	4,325.4	4,395.4	4,358.3	15.4	12.1	164.39	195.8	-469.5	252.4	235.5	16.92	14.922	
4,500.0	4,423.2	4,495.1	4,457.0	15.9	12.4	164.42	201.2	-482.9	259.3	242.0	17.31	14.979	
4,600.0	4,521.0	4,594.9	4,555.7	16.3	12.7	164.45	206.6	-496.4	266.2	248.5	17.71	15.034	
4,700.0	4,618.7	4,694.6	4,654.4	16.7	13.0	164.47	212.0	-509.8	273.1	255.0	18.10	15.086	
4,800.0	4,716.5	4,794.4	4,753.1	17.1	13.4	164.50	217.4	-523.3	280.0	261.5	18.50	15.136	
4,900.0	4,814.3	4,894.2	4,851.9	17.5	13.7	164.52	222.8	-536.8	286.9	268.0	18.90	15.184	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 1D-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,912.0	4,993.9	4,950.6	17.9	14.0	164.54	228.2	-550.2	293.8	274.5	19.29	15.230	
5,100.0	5,009.8	5,093.7	5,049.3	18.3	14.3	164.56	233.6	-563.7	300.7	281.0	19.69	15.274	
5,200.0	5,107.6	5,193.5	5,148.0	18.7	14.6	164.58	239.0	-577.1	307.6	287.5	20.08	15.317	
5,300.0	5,205.3	5,293.2	5,246.7	19.2	14.9	164.60	244.3	-590.6	314.5	294.0	20.48	15.358	
5,400.0	5,303.1	5,393.0	5,345.4	19.6	15.2	164.62	249.7	-604.0	321.4	300.6	20.88	15.397	
5,500.0	5,400.9	5,492.7	5,444.1	20.0	15.5	164.64	255.1	-617.5	328.3	307.1	21.27	15.435	
5,600.0	5,498.6	5,592.5	5,542.8	20.4	15.8	164.65	260.5	-630.9	335.2	313.6	21.67	15.471	
5,700.0	5,596.4	5,692.3	5,641.5	20.8	16.1	164.67	265.9	-644.4	342.1	320.1	22.06	15.506	
5,800.0	5,694.2	5,792.0	5,740.2	21.2	16.4	164.68	271.3	-657.8	349.0	326.6	22.46	15.540	
5,900.0	5,791.9	5,891.8	5,838.9	21.6	16.7	164.70	276.7	-671.3	355.9	333.1	22.86	15.573	
6,000.0	5,889.7	5,991.5	5,937.6	22.0	17.1	164.71	282.1	-684.8	362.8	339.6	23.25	15.604	
6,100.0	5,987.5	6,091.3	6,036.3	22.4	17.4	164.73	287.5	-698.2	369.7	346.1	23.65	15.635	
6,200.0	6,085.3	6,191.1	6,135.0	22.9	17.7	164.74	292.9	-711.7	376.6	352.6	24.05	15.664	
6,300.0	6,183.0	6,290.8	6,233.7	23.3	18.0	164.75	298.3	-725.1	383.5	359.1	24.44	15.692	
6,400.0	6,280.8	6,390.6	6,332.4	23.7	18.3	164.76	303.7	-738.6	390.4	365.6	24.84	15.720	
6,500.0	6,378.6	6,490.4	6,431.1	24.1	18.6	164.78	309.1	-752.0	397.3	372.1	25.23	15.747	
6,600.0	6,476.3	6,590.1	6,529.8	24.5	18.9	164.79	314.5	-765.5	404.2	378.6	25.63	15.773	
6,700.0	6,574.1	6,689.9	6,628.5	24.9	19.2	164.80	319.9	-778.9	411.1	385.1	26.03	15.798	
6,800.0	6,671.9	6,789.6	6,727.2	25.3	19.5	164.81	325.2	-792.4	418.1	391.6	26.42	15.822	
6,900.0	6,769.6	6,889.4	6,825.9	25.7	19.8	164.82	330.6	-805.9	425.0	398.1	26.82	15.846	
7,000.0	6,867.4	6,989.2	6,924.6	26.2	20.1	164.83	336.0	-819.3	431.9	404.6	27.21	15.869	
7,100.0	6,965.2	7,088.9	7,023.3	26.6	20.4	164.84	341.4	-832.8	438.8	411.1	27.61	15.891	
7,167.0	7,030.7	7,155.7	7,089.5	26.8	20.6	165.26	341.8	-841.8	443.4	415.7	27.71	15.999	
7,200.0	7,063.0	7,188.4	7,121.8	27.0	20.7	178.24	339.7	-846.2	445.7	418.0	27.63	16.131	
7,250.0	7,111.9	7,237.6	7,170.2	27.2	20.8	-162.10	333.8	-852.8	449.2	421.7	27.48	16.348	
7,300.0	7,160.6	7,286.5	7,217.8	27.3	20.9	-145.51	324.6	-859.3	452.8	425.4	27.31	16.577	
7,350.0	7,208.9	7,335.1	7,264.3	27.5	20.9	-133.02	312.2	-865.6	456.3	429.2	27.15	16.809	
7,400.0	7,256.5	7,383.4	7,309.7	27.6	21.0	-123.92	296.8	-871.8	459.9	432.9	27.00	17.035	
7,450.0	7,303.1	7,431.5	7,353.7	27.8	21.1	-117.20	278.4	-877.8	463.4	436.5	26.87	17.246	
7,500.0	7,348.7	7,479.3	7,396.1	27.9	21.1	-112.09	257.2	-883.6	466.9	440.1	26.77	17.436	
7,550.0	7,392.8	7,526.8	7,436.8	28.0	21.1	-108.10	233.3	-889.1	470.2	443.5	26.72	17.598	
7,600.0	7,435.4	7,574.2	7,475.7	28.1	21.2	-104.89	206.9	-894.4	473.5	446.8	26.72	17.725	
7,650.0	7,476.2	7,621.3	7,512.7	28.2	21.2	-102.26	178.1	-899.5	476.7	450.0	26.76	17.814	
7,700.0	7,515.1	7,668.2	7,547.5	28.3	21.3	-100.08	147.0	-904.2	479.7	452.9	26.86	17.864	
7,750.0	7,551.7	7,715.0	7,580.1	28.4	21.3	-98.24	113.8	-908.7	482.6	455.6	27.01	17.872	
7,800.0	7,586.0	7,761.5	7,610.4	28.5	21.4	-96.67	78.7	-912.8	485.3	458.1	27.21	17.839	
7,850.0	7,617.8	7,808.0	7,638.3	28.6	21.4	-95.34	41.8	-916.6	487.9	460.4	27.47	17.760	
7,900.0	7,646.9	7,854.3	7,663.7	28.7	21.5	-94.20	3.2	-920.1	490.2	462.4	27.75	17.666	
7,950.0	7,673.1	7,900.0	7,686.3	28.8	21.6	-93.24	-36.4	-923.1	492.3	464.2	28.09	17.525	
8,000.0	7,696.5	7,946.5	7,706.7	29.0	21.8	-92.42	-78.1	-925.9	494.2	465.7	28.48	17.353	
8,050.0	7,716.7	7,992.5	7,724.2	29.1	21.9	-91.74	-120.6	-928.3	495.8	466.9	28.90	17.154	
8,100.0	7,733.9	8,038.4	7,738.9	29.3	22.1	-91.19	-164.0	-930.3	497.1	467.8	29.36	16.931	
8,150.0	7,747.7	8,084.3	7,750.8	29.4	22.3	-90.76	-208.3	-931.9	498.3	468.4	29.86	16.688	
8,200.0	7,758.3	8,130.1	7,759.9	29.6	22.5	-90.44	-253.1	-933.2	499.1	468.7	30.38	16.426	
8,250.0	7,765.5	8,175.9	7,766.1	29.8	22.8	-90.23	-298.5	-934.0	499.7	468.7	30.94	16.149	
8,300.0	7,769.3	8,221.6	7,769.4	30.0	23.0	-90.13	-344.1	-934.5	500.0	468.4	31.53	15.858	
8,330.9	7,770.0	8,251.3	7,770.0	30.2	23.2	-90.11	-373.8	-934.5	500.0	468.1	31.91	15.668	
8,348.9	7,770.0	8,267.8	7,770.0	30.3	23.3	-90.11	-390.2	-934.5	500.0	467.8	32.24	15.509	
8,400.0	7,770.0	8,318.8	7,770.0	30.5	23.6	-90.11	-441.3	-934.5	500.0	466.8	33.23	15.046	
8,500.0	7,770.0	8,418.8	7,770.0	31.1	24.4	-90.11	-541.3	-934.5	500.0	464.7	35.36	14.142	
8,600.0	7,770.0	8,518.8	7,770.0	31.8	25.2	-90.11	-641.3	-934.5	500.0	462.3	37.69	13.267	
8,700.0	7,770.0	8,618.8	7,770.0	32.5	26.2	-90.11	-741.3	-934.5	500.0	459.8	40.19	12.441	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 1D-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,800.0	7,770.0	8,718.8	7,770.0	33.3	27.2	-90.11	-841.3	-934.5	500.0	457.2	42.84	11.673	
8,900.0	7,770.0	8,818.8	7,770.0	34.2	28.3	-90.11	-941.3	-934.5	500.0	454.4	45.60	10.966	
9,000.0	7,770.0	8,918.8	7,770.0	35.2	29.5	-90.11	-1,041.3	-934.5	500.0	451.6	48.46	10.319	
9,100.0	7,770.0	9,018.8	7,770.0	36.2	30.7	-90.11	-1,141.3	-934.5	500.0	448.6	51.39	9.729	
9,200.0	7,770.0	9,118.8	7,770.0	37.3	31.9	-90.11	-1,241.3	-934.5	500.0	445.6	54.40	9.191	
9,300.0	7,770.0	9,218.8	7,770.0	38.4	33.3	-90.11	-1,341.3	-934.5	500.0	442.6	57.46	8.701	
9,400.0	7,770.0	9,318.8	7,770.0	39.6	34.6	-90.11	-1,441.3	-934.5	500.0	439.4	60.58	8.254	
9,500.0	7,770.0	9,418.8	7,770.0	40.8	36.0	-90.11	-1,541.3	-934.5	500.0	436.3	63.73	7.846	
9,600.0	7,770.0	9,518.8	7,770.0	42.0	37.4	-90.11	-1,641.3	-934.5	500.0	433.1	66.92	7.472	
9,700.0	7,770.0	9,618.8	7,770.0	43.3	38.9	-90.11	-1,741.3	-934.5	500.0	429.9	70.13	7.129	
9,800.0	7,770.0	9,718.8	7,770.0	44.6	40.3	-90.11	-1,841.3	-934.5	500.0	426.6	73.38	6.814	
9,900.0	7,770.0	9,818.8	7,770.0	46.0	41.8	-90.11	-1,941.3	-934.5	500.0	423.4	76.65	6.524	
10,000.0	7,770.0	9,918.8	7,770.0	47.4	43.3	-90.11	-2,041.3	-934.5	500.0	420.1	79.94	6.255	
10,100.0	7,770.0	10,018.8	7,770.0	48.7	44.9	-90.11	-2,141.3	-934.5	500.0	416.8	83.24	6.007	
10,200.0	7,770.0	10,118.8	7,770.0	50.2	46.4	-90.11	-2,241.3	-934.5	500.0	413.5	86.57	5.776	
10,300.0	7,770.0	10,218.8	7,770.0	51.6	48.0	-90.11	-2,341.3	-934.5	500.0	410.1	89.90	5.562	
10,400.0	7,770.0	10,318.8	7,770.0	53.1	49.5	-90.11	-2,441.3	-934.5	500.0	406.8	93.25	5.362	
10,500.0	7,770.0	10,418.8	7,770.0	54.6	51.1	-90.11	-2,541.3	-934.5	500.0	403.4	96.61	5.176	
10,600.0	7,770.0	10,518.8	7,770.0	56.1	52.7	-90.11	-2,641.3	-934.5	500.0	400.0	99.98	5.001	
10,700.0	7,770.0	10,618.8	7,770.0	57.6	54.3	-90.11	-2,741.3	-934.5	500.0	396.7	103.36	4.838	
10,800.0	7,770.0	10,718.8	7,770.0	59.1	55.9	-90.11	-2,841.3	-934.5	500.0	393.3	106.75	4.684	
10,900.0	7,770.0	10,818.8	7,770.0	60.6	57.6	-90.11	-2,941.3	-934.5	500.0	389.9	110.15	4.540	
11,000.0	7,770.0	10,918.8	7,770.0	62.2	59.2	-90.11	-3,041.3	-934.5	500.0	386.5	113.55	4.404	
11,100.0	7,770.0	11,018.8	7,770.0	63.7	60.8	-90.11	-3,141.3	-934.5	500.0	383.1	116.96	4.275	
11,200.0	7,770.0	11,118.8	7,770.0	65.3	62.5	-90.11	-3,241.3	-934.5	500.0	379.6	120.37	4.154	
11,300.0	7,770.0	11,218.8	7,770.0	66.9	64.1	-90.11	-3,341.3	-934.5	500.0	376.2	123.79	4.039	
11,400.0	7,770.0	11,318.8	7,770.0	68.5	65.8	-90.11	-3,441.3	-934.5	500.0	372.8	127.22	3.930	
11,500.0	7,770.0	11,418.8	7,770.0	70.1	67.4	-90.11	-3,541.3	-934.5	500.0	369.4	130.64	3.827	
11,600.0	7,770.0	11,518.8	7,770.0	71.7	69.1	-90.11	-3,641.3	-934.5	500.0	365.9	134.08	3.729	
11,700.0	7,770.0	11,618.8	7,770.0	73.3	70.8	-90.11	-3,741.3	-934.5	500.0	362.5	137.51	3.636	
11,800.0	7,770.0	11,718.8	7,770.0	74.9	72.4	-90.11	-3,841.3	-934.5	500.0	359.1	140.95	3.547	
11,900.0	7,770.0	11,818.8	7,770.0	76.5	74.1	-90.11	-3,941.3	-934.5	500.0	355.6	144.40	3.463	
12,000.0	7,770.0	11,918.8	7,770.0	78.1	75.8	-90.11	-4,041.3	-934.5	500.0	352.2	147.84	3.382	
12,100.0	7,770.0	12,018.8	7,770.0	79.8	77.5	-90.11	-4,141.3	-934.5	500.0	348.7	151.29	3.305	
12,200.0	7,770.0	12,118.8	7,770.0	81.4	79.2	-90.11	-4,241.3	-934.5	500.0	345.3	154.75	3.231	
12,300.0	7,770.0	12,218.8	7,770.0	83.0	80.8	-90.11	-4,341.3	-934.5	500.0	341.8	158.20	3.161	
12,400.0	7,770.0	12,318.8	7,770.0	84.7	82.5	-90.11	-4,441.3	-934.5	500.0	338.4	161.66	3.093	
12,500.0	7,770.0	12,418.8	7,770.0	86.3	84.2	-90.11	-4,541.3	-934.5	500.0	334.9	165.12	3.028	
12,600.0	7,770.0	12,518.8	7,770.0	88.0	85.9	-90.11	-4,641.3	-934.5	500.0	331.4	168.58	2.966	
12,700.0	7,770.0	12,618.8	7,770.0	89.7	87.6	-90.11	-4,741.3	-934.5	500.0	328.0	172.04	2.906	
12,800.0	7,770.0	12,718.8	7,770.0	91.3	89.3	-90.11	-4,841.3	-934.5	500.0	324.5	175.50	2.849	
12,900.0	7,770.0	12,818.8	7,770.0	93.0	91.0	-90.11	-4,941.3	-934.5	500.0	321.1	178.97	2.794	
13,000.0	7,770.0	12,918.8	7,770.0	94.7	92.7	-90.11	-5,041.3	-934.5	500.0	317.6	182.44	2.741	
13,100.0	7,770.0	13,018.8	7,770.0	96.3	94.4	-90.11	-5,141.3	-934.5	500.0	314.1	185.91	2.690	
13,200.0	7,770.0	13,118.8	7,770.0	98.0	96.1	-90.11	-5,241.3	-934.5	500.0	310.6	189.38	2.640	
13,300.0	7,770.0	13,218.8	7,770.0	99.7	97.9	-90.11	-5,341.3	-934.5	500.0	307.2	192.85	2.593	
13,400.0	7,770.0	13,318.8	7,770.0	101.4	99.6	-90.11	-5,441.3	-934.5	500.0	303.7	196.33	2.547	
13,500.0	7,770.0	13,418.8	7,770.0	103.1	101.3	-90.11	-5,541.3	-934.5	500.0	300.2	199.80	2.503	
13,600.0	7,770.0	13,518.8	7,770.0	104.7	103.0	-90.11	-5,641.3	-934.5	500.0	296.7	203.28	2.460	
13,700.0	7,770.0	13,618.8	7,770.0	106.4	104.7	-90.11	-5,741.3	-934.5	500.0	293.3	206.75	2.418	
13,800.0	7,770.0	13,718.8	7,770.0	108.1	106.4	-90.11	-5,841.3	-934.5	500.0	289.8	210.23	2.378	
13,900.0	7,770.0	13,818.8	7,770.0	109.8	108.1	-90.11	-5,941.3	-934.5	500.0	286.3	213.71	2.340	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 1D-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,000.0	7,770.0	13,918.8	7,770.0	111.5	109.9	-90.11	-6,041.3	-934.5	500.0	282.8	217.19	2.302	
14,100.0	7,770.0	14,018.8	7,770.0	113.2	111.6	-90.11	-6,141.3	-934.5	500.0	279.4	220.67	2.266	
14,200.0	7,770.0	14,118.8	7,770.0	114.9	113.3	-90.11	-6,241.3	-934.5	500.0	275.9	224.15	2.231	
14,300.0	7,770.0	14,218.8	7,770.0	116.6	115.0	-90.11	-6,341.3	-934.5	500.0	272.4	227.63	2.197	
14,400.0	7,770.0	14,318.8	7,770.0	118.3	116.8	-90.11	-6,441.3	-934.5	500.0	268.9	231.12	2.163	
14,500.0	7,770.0	14,418.8	7,770.0	120.0	118.5	-90.11	-6,541.3	-934.5	500.0	265.4	234.60	2.131	
14,600.0	7,770.0	14,518.8	7,770.0	121.7	120.2	-90.11	-6,641.3	-934.5	500.0	261.9	238.09	2.100	
14,700.0	7,770.0	14,618.8	7,770.0	123.4	121.9	-90.11	-6,741.3	-934.5	500.0	258.5	241.57	2.070	
14,800.0	7,770.0	14,718.8	7,770.0	125.1	123.7	-90.11	-6,841.3	-934.5	500.0	255.0	245.06	2.040	
14,900.0	7,770.0	14,818.8	7,770.0	126.8	125.4	-90.11	-6,941.3	-934.5	500.0	251.5	248.54	2.012	
15,000.0	7,770.0	14,918.8	7,770.0	128.5	127.1	-90.11	-7,041.3	-934.5	500.0	248.0	252.03	1.984	
15,100.0	7,770.0	15,018.8	7,770.0	130.2	128.8	-90.11	-7,141.3	-934.5	500.0	244.5	255.52	1.957	
15,200.0	7,770.0	15,118.8	7,770.0	132.0	130.6	-90.11	-7,241.3	-934.5	500.0	241.0	259.01	1.931	
15,300.0	7,770.0	15,218.8	7,770.0	133.7	132.3	-90.11	-7,341.3	-934.5	500.0	237.5	262.50	1.905	
15,400.0	7,770.0	15,318.8	7,770.0	135.4	134.0	-90.11	-7,441.3	-934.5	500.0	234.0	265.99	1.880	
15,500.0	7,770.0	15,418.8	7,770.0	137.1	135.8	-90.11	-7,541.3	-934.5	500.0	230.5	269.48	1.856	
15,600.0	7,770.0	15,518.8	7,770.0	138.8	137.5	-90.11	-7,641.3	-934.5	500.0	227.1	272.97	1.832	
15,700.0	7,770.0	15,618.8	7,770.0	140.5	139.2	-90.11	-7,741.3	-934.5	500.0	223.6	276.46	1.809	
15,800.0	7,770.0	15,718.8	7,770.0	142.2	141.0	-90.11	-7,841.3	-934.5	500.0	220.1	279.95	1.786	
15,900.0	7,770.0	15,818.8	7,770.0	144.0	142.7	-90.11	-7,941.3	-934.5	500.0	216.6	283.44	1.764	
16,000.0	7,770.0	15,918.8	7,770.0	145.7	144.4	-90.11	-8,041.3	-934.5	500.0	213.1	286.93	1.743	
16,100.0	7,770.0	16,018.8	7,770.0	147.4	146.2	-90.11	-8,141.3	-934.5	500.0	209.6	290.42	1.722	
16,200.0	7,770.0	16,118.8	7,770.0	149.1	147.9	-90.11	-8,241.3	-934.5	500.0	206.1	293.92	1.701	
16,300.0	7,770.0	16,218.8	7,770.0	150.8	149.6	-90.11	-8,341.3	-934.5	500.0	202.6	297.41	1.681	
16,400.0	7,770.0	16,318.8	7,770.0	152.6	151.4	-90.11	-8,441.3	-934.5	500.0	199.1	300.90	1.662	
16,500.0	7,770.0	16,418.8	7,770.0	154.3	153.1	-90.11	-8,541.3	-934.5	500.0	195.6	304.40	1.643	
16,600.0	7,770.0	16,518.8	7,770.0	156.0	154.8	-90.11	-8,641.3	-934.5	500.0	192.1	307.89	1.624	
16,700.0	7,770.0	16,618.8	7,770.0	157.7	156.6	-90.11	-8,741.3	-934.5	500.0	188.6	311.39	1.606	
16,800.0	7,770.0	16,718.8	7,770.0	159.5	158.3	-90.11	-8,841.3	-934.5	500.0	185.1	314.88	1.588	
16,900.0	7,770.0	16,818.8	7,770.0	161.2	160.1	-90.11	-8,941.3	-934.5	500.0	181.6	318.38	1.571	
17,000.0	7,770.0	16,918.8	7,770.0	162.9	161.8	-90.11	-9,041.3	-934.5	500.0	178.2	321.87	1.553	
17,100.0	7,770.0	17,018.8	7,770.0	164.6	163.5	-90.11	-9,141.3	-934.5	500.0	174.7	325.37	1.537	
17,200.0	7,770.0	17,118.8	7,770.0	166.4	165.3	-90.11	-9,241.3	-934.5	500.0	171.2	328.86	1.520	
17,300.0	7,770.0	17,218.8	7,770.0	168.1	167.0	-90.11	-9,341.3	-934.5	500.0	167.7	332.36	1.504	
17,400.0	7,770.0	17,318.8	7,770.0	169.8	168.7	-90.11	-9,441.3	-934.5	500.0	164.2	335.86	1.489	Level 3
17,500.0	7,770.0	17,418.8	7,770.0	171.6	170.5	-90.11	-9,541.3	-934.5	500.0	160.7	339.35	1.473	Level 3
17,600.0	7,770.0	17,518.8	7,770.0	173.3	172.2	-90.11	-9,641.3	-934.5	500.0	157.2	342.85	1.458	Level 3
17,700.0	7,770.0	17,618.8	7,770.0	175.0	174.0	-90.11	-9,741.3	-934.5	500.0	153.7	346.35	1.444	Level 3
17,775.9	7,770.0	17,694.8	7,770.0	176.3	175.3	-90.11	-9,817.2	-934.5	500.0	151.0	349.00	1.433	Level 3, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.70	-0.4	29.9	30.0				
100.0	100.0	99.0	99.0	0.2	0.2	90.70	-0.4	29.9	29.9	29.6	0.30	99.107	
200.0	200.0	199.0	199.0	0.3	0.3	90.70	-0.4	29.9	29.9	29.3	0.65	46.001	
250.0	250.0	249.0	249.0	0.4	0.4	90.70	-0.4	29.9	29.9	29.1	0.83	36.276	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	165.81	-0.4	29.9	30.2	29.2	1.00	30.157	
400.0	400.0	399.0	399.0	0.7	0.7	166.58	-0.4	29.9	31.9	30.5	1.35	23.613	
500.0	499.9	499.5	499.5	0.9	0.8	167.28	0.0	29.2	34.5	32.8	1.70	20.299	
600.0	599.8	600.0	599.9	1.1	1.0	167.28	1.3	26.9	37.2	35.2	2.05	18.173	
700.0	699.5	700.6	700.4	1.3	1.2	166.72	3.4	23.0	40.1	37.7	2.40	16.708	
800.0	799.2	801.2	800.8	1.5	1.4	165.72	6.3	17.6	43.2	40.4	2.76	15.645	
900.0	898.6	901.8	901.2	1.7	1.6	164.38	10.1	10.6	46.3	43.2	3.12	14.844	
1,000.0	997.9	1,002.5	1,001.4	2.0	1.8	162.77	14.7	2.1	49.7	46.2	3.50	14.215	
1,100.0	1,096.9	1,103.0	1,101.2	2.3	2.1	160.98	20.1	-7.9	53.3	49.4	3.88	13.716	
1,200.0	1,195.7	1,202.9	1,200.4	2.6	2.3	159.73	25.7	-18.4	58.1	53.8	4.28	13.566	
1,300.0	1,294.1	1,302.7	1,299.5	2.9	2.6	159.22	31.3	-28.8	64.5	59.9	4.68	13.785	
1,400.0	1,392.3	1,402.3	1,398.5	3.3	2.8	159.30	37.0	-39.2	72.6	67.5	5.08	14.295	
1,462.7	1,453.7	1,464.7	1,460.4	3.5	3.0	159.56	40.5	-45.7	78.5	73.2	5.33	14.739	
1,500.0	1,490.1	1,501.9	1,497.3	3.7	3.1	159.76	42.6	-49.6	82.2	76.7	5.48	15.015	
1,600.0	1,587.9	1,601.4	1,596.1	4.0	3.4	160.21	48.2	-60.0	92.1	86.3	5.88	15.684	
1,700.0	1,685.7	1,700.9	1,694.9	4.4	3.6	160.58	53.8	-70.4	102.1	95.8	6.27	16.268	
1,800.0	1,783.4	1,800.4	1,793.7	4.8	3.9	160.88	59.4	-80.8	112.0	105.3	6.68	16.780	
1,900.0	1,881.2	1,899.9	1,892.5	5.2	4.1	161.13	65.0	-91.2	122.0	114.9	7.08	17.235	
2,000.0	1,979.0	1,999.4	1,991.3	5.6	4.4	161.34	70.7	-101.6	131.9	124.4	7.48	17.639	
2,100.0	2,076.7	2,098.9	2,090.1	6.0	4.7	161.53	76.3	-112.0	141.8	134.0	7.88	18.002	
2,200.0	2,174.5	2,198.4	2,188.9	6.4	4.9	161.69	81.9	-122.4	151.8	143.5	8.28	18.330	
2,300.0	2,272.3	2,297.9	2,287.7	6.8	5.2	161.83	87.5	-132.8	161.7	153.0	8.68	18.627	
2,400.0	2,370.0	2,397.4	2,386.5	7.3	5.5	161.95	93.1	-143.2	171.7	162.6	9.08	18.897	
2,500.0	2,467.8	2,496.9	2,485.3	7.7	5.7	162.06	98.7	-153.6	181.6	172.1	9.49	19.144	
2,600.0	2,565.6	2,596.4	2,584.1	8.1	6.0	162.16	104.3	-164.0	191.5	181.7	9.89	19.371	
2,700.0	2,663.4	2,695.9	2,682.9	8.5	6.3	162.25	110.0	-174.4	201.5	191.2	10.29	19.579	
2,800.0	2,761.1	2,795.4	2,781.7	8.9	6.5	162.33	115.6	-184.8	211.4	200.7	10.69	19.772	
2,900.0	2,858.9	2,894.9	2,880.5	9.3	6.8	162.41	121.2	-195.2	221.4	210.3	11.10	19.951	
3,000.0	2,956.7	2,994.4	2,979.3	9.7	7.1	162.47	126.8	-205.6	231.3	219.8	11.50	20.117	
3,100.0	3,054.4	3,093.9	3,078.1	10.1	7.3	162.53	132.4	-216.0	241.3	229.4	11.90	20.272	
3,200.0	3,152.2	3,193.4	3,176.9	10.5	7.6	162.59	138.0	-226.4	251.2	238.9	12.31	20.416	
3,300.0	3,250.0	3,292.9	3,275.7	10.9	7.9	162.64	143.6	-236.8	261.2	248.5	12.71	20.551	
3,400.0	3,347.7	3,392.4	3,374.5	11.3	8.2	162.69	149.2	-247.2	271.1	258.0	13.11	20.678	
3,500.0	3,445.5	3,491.9	3,473.3	11.7	8.4	162.74	154.9	-257.6	281.1	267.6	13.51	20.797	
3,600.0	3,543.3	3,591.4	3,572.1	12.2	8.7	162.78	160.5	-268.0	291.0	277.1	13.92	20.909	
3,700.0	3,641.0	3,690.9	3,670.9	12.6	9.0	162.82	166.1	-278.4	301.0	286.6	14.32	21.015	
3,800.0	3,738.8	3,790.4	3,769.7	13.0	9.2	162.86	171.7	-288.8	310.9	296.2	14.72	21.115	
3,900.0	3,836.6	3,890.0	3,868.5	13.4	9.5	162.89	177.3	-299.2	320.9	305.7	15.13	21.210	
4,000.0	3,934.3	3,989.5	3,967.3	13.8	9.8	162.92	182.9	-309.6	330.8	315.3	15.53	21.300	
4,100.0	4,032.1	4,089.0	4,066.1	14.2	10.0	162.95	188.5	-320.0	340.8	324.8	15.93	21.385	
4,200.0	4,129.9	4,188.5	4,164.9	14.6	10.3	162.98	194.2	-330.4	350.7	334.4	16.34	21.465	
4,300.0	4,227.7	4,288.0	4,263.7	15.0	10.6	163.01	199.8	-340.8	360.7	343.9	16.74	21.542	
4,400.0	4,325.4	4,387.5	4,362.5	15.4	10.8	163.04	205.4	-351.2	370.6	353.5	17.15	21.616	
4,500.0	4,423.2	4,487.0	4,461.3	15.9	11.1	163.06	211.0	-361.6	380.6	363.0	17.55	21.685	
4,600.0	4,521.0	4,586.5	4,560.1	16.3	11.4	163.08	216.6	-372.0	390.5	372.6	17.95	21.752	
4,700.0	4,618.7	4,686.0	4,658.9	16.7	11.7	163.11	222.2	-382.4	400.5	382.1	18.36	21.816	
4,800.0	4,716.5	4,785.5	4,757.7	17.1	11.9	163.13	227.8	-392.8	410.4	391.6	18.76	21.877	
4,900.0	4,814.3	4,885.0	4,856.5	17.5	12.2	163.15	233.5	-403.2	420.3	401.2	19.16	21.935	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,912.0	4,984.5	4,955.3	17.9	12.5	163.17	239.1	-413.6	430.3	410.7	19.57	21.991	
5,100.0	5,009.8	5,084.0	5,054.1	18.3	12.7	163.18	244.7	-424.0	440.2	420.3	19.97	22.045	
5,200.0	5,107.6	5,183.5	5,152.9	18.7	13.0	163.20	250.3	-434.3	450.2	429.8	20.37	22.096	
5,300.0	5,205.3	5,283.0	5,251.7	19.2	13.3	163.22	255.9	-444.7	460.1	439.4	20.78	22.146	
5,400.0	5,303.1	5,382.5	5,350.5	19.6	13.5	163.23	261.5	-455.1	470.1	448.9	21.18	22.193	
5,500.0	5,400.9	5,482.0	5,449.3	20.0	13.8	163.25	267.1	-465.5	480.0	458.5	21.59	22.239	
5,600.0	5,498.6	5,581.5	5,548.1	20.4	14.1	163.26	272.8	-475.9	490.0	468.0	21.99	22.283	
5,700.0	5,596.4	5,681.0	5,646.9	20.8	14.4	163.28	278.4	-486.3	499.9	477.6	22.39	22.326	
5,800.0	5,694.2	5,780.5	5,745.7	21.2	14.6	163.29	284.0	-496.7	509.9	487.1	22.80	22.367	
5,900.0	5,791.9	5,880.0	5,844.5	21.6	14.9	163.30	289.6	-507.1	519.8	496.6	23.20	22.406	
6,000.0	5,889.7	5,979.5	5,943.3	22.0	15.2	163.32	295.2	-517.5	529.8	506.2	23.60	22.445	
6,100.0	5,987.5	6,079.0	6,042.1	22.4	15.4	163.33	300.8	-527.9	539.7	515.7	24.01	22.482	
6,200.0	6,085.3	6,178.5	6,140.9	22.9	15.7	163.34	306.4	-538.3	549.7	525.3	24.41	22.517	
6,300.0	6,183.0	6,278.0	6,239.7	23.3	16.0	163.35	312.0	-548.7	559.6	534.8	24.82	22.552	
6,400.0	6,280.8	6,377.5	6,338.5	23.7	16.2	163.36	317.7	-559.1	569.6	544.4	25.22	22.585	
6,500.0	6,378.6	6,477.1	6,437.3	24.1	16.5	163.37	323.3	-569.5	579.5	553.9	25.62	22.618	
6,600.0	6,476.3	6,576.6	6,536.1	24.5	16.8	163.38	328.9	-579.9	589.5	563.5	26.03	22.649	
6,700.0	6,574.1	6,676.1	6,634.9	24.9	17.1	163.39	334.5	-590.3	599.4	573.0	26.43	22.679	
6,800.0	6,671.9	6,775.6	6,733.7	25.3	17.3	163.40	340.1	-600.7	609.4	582.6	26.84	22.709	
6,900.0	6,769.6	6,876.3	6,833.8	25.7	17.6	163.62	343.6	-611.3	619.3	592.1	27.15	22.808	
7,000.0	6,867.4	6,975.9	6,932.3	26.2	17.7	164.97	334.4	-621.6	629.0	602.0	27.06	23.249	
7,100.0	6,965.2	7,069.8	7,023.3	26.6	17.8	167.33	313.3	-631.2	639.6	612.9	26.66	23.989	
7,167.0	7,030.7	7,128.3	7,078.2	26.8	17.8	169.28	294.2	-637.0	647.8	621.4	26.34	24.595	
7,200.0	7,063.0	7,155.9	7,103.6	27.0	17.9	-176.98	283.6	-639.7	652.3	626.2	26.13	24.968	
7,250.0	7,111.9	7,197.1	7,140.6	27.2	17.9	-156.18	266.0	-643.6	659.6	633.7	25.87	25.495	
7,300.0	7,160.6	7,237.5	7,175.8	27.3	17.9	-138.49	246.7	-647.3	667.3	641.6	25.71	25.950	
7,350.0	7,208.9	7,277.2	7,209.4	27.5	17.9	-124.97	225.7	-650.8	675.3	649.7	25.66	26.315	
7,400.0	7,256.5	7,316.3	7,241.3	27.6	17.9	-114.87	203.4	-654.1	683.6	657.9	25.72	26.584	
7,450.0	7,303.1	7,354.8	7,271.4	27.8	17.9	-107.20	179.7	-657.3	692.1	666.2	25.86	26.764	
7,500.0	7,348.7	7,392.8	7,299.9	27.9	17.9	-101.21	154.7	-660.3	700.6	674.5	26.08	26.861	
7,550.0	7,392.8	7,430.4	7,326.8	28.0	17.9	-96.38	128.5	-663.1	709.0	682.7	26.37	26.892	
7,600.0	7,435.4	7,467.5	7,351.9	28.1	18.0	-92.40	101.3	-665.8	717.4	690.7	26.69	26.881	
7,650.0	7,476.2	7,500.0	7,372.7	28.2	18.0	-89.13	76.5	-668.0	725.5	698.5	26.99	26.884	
7,700.0	7,515.1	7,540.8	7,397.2	28.3	18.0	-86.20	44.0	-670.6	733.4	706.0	27.36	26.801	
7,750.0	7,551.7	7,577.0	7,417.4	28.4	18.1	-83.75	14.0	-672.7	740.9	713.2	27.67	26.778	
7,800.0	7,586.0	7,612.9	7,435.9	28.5	18.2	-81.63	-16.7	-674.6	748.0	720.0	27.98	26.737	
7,850.0	7,617.8	7,650.0	7,453.4	28.6	18.3	-79.78	-49.4	-676.5	754.7	726.4	28.27	26.698	
7,900.0	7,646.9	7,684.1	7,468.0	28.7	18.4	-78.22	-80.1	-678.0	760.8	732.3	28.50	26.697	
7,950.0	7,673.1	7,719.4	7,481.5	28.8	18.5	-76.86	-112.7	-679.4	766.4	737.7	28.71	26.694	
8,000.0	7,696.5	7,750.0	7,491.9	29.0	18.6	-75.74	-141.5	-680.5	771.4	742.5	28.85	26.735	
8,050.0	7,716.7	7,789.6	7,503.6	29.1	18.8	-74.73	-179.3	-681.8	775.7	746.7	29.05	26.704	
8,100.0	7,733.9	7,824.5	7,512.2	29.3	19.0	-73.94	-213.1	-682.7	779.4	750.2	29.19	26.701	
8,150.0	7,747.7	7,859.4	7,519.0	29.4	19.2	-73.31	-247.3	-683.4	782.4	753.1	29.32	26.686	
8,200.0	7,758.3	7,900.0	7,525.0	29.6	19.4	-72.82	-287.4	-684.0	784.7	755.2	29.49	26.605	
8,250.0	7,765.5	7,928.9	7,527.8	29.8	19.6	-72.52	-316.2	-684.3	786.2	756.6	29.59	26.574	
8,300.0	7,769.3	7,963.6	7,529.7	30.0	19.8	-72.35	-350.8	-684.5	787.0	757.3	29.74	26.466	
8,330.9	7,770.0	7,985.2	7,530.0	30.2	20.0	-72.33	-372.4	-684.5	787.2	757.3	29.84	26.377	
8,348.3	7,770.0	8,002.4	7,530.0	30.3	20.1	-72.33	-389.6	-684.5	787.2	757.0	30.17	26.096	
8,400.0	7,770.0	8,054.1	7,530.0	30.5	20.5	-72.33	-441.3	-684.5	787.2	756.0	31.16	25.265	
8,500.0	7,770.0	8,154.1	7,530.0	31.1	21.4	-72.33	-541.3	-684.5	787.2	754.0	33.23	23.687	
8,600.0	7,770.0	8,254.1	7,530.0	31.8	22.3	-72.33	-641.3	-684.5	787.2	751.7	35.50	22.173	
8,700.0	7,770.0	8,354.1	7,530.0	32.5	23.4	-72.33	-741.3	-684.5	787.2	749.3	37.93	20.752	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,800.0	7,770.0	8,454.1	7,530.0	33.3	24.5	-72.33	-841.3	-684.5	787.2	746.7	40.49	19.440	
8,900.0	7,770.0	8,554.1	7,530.0	34.2	25.7	-72.33	-941.3	-684.5	787.2	744.0	43.16	18.239	
9,000.0	7,770.0	8,654.1	7,530.0	35.2	27.0	-72.33	-1,041.3	-684.5	787.2	741.3	45.92	17.144	
9,100.0	7,770.0	8,754.1	7,530.0	36.2	28.3	-72.33	-1,141.3	-684.5	787.2	738.4	48.75	16.148	
9,200.0	7,770.0	8,854.1	7,530.0	37.3	29.7	-72.33	-1,241.3	-684.5	787.2	735.5	51.64	15.244	
9,300.0	7,770.0	8,954.1	7,530.0	38.4	31.1	-72.33	-1,341.3	-684.5	787.2	732.6	54.58	14.422	
9,400.0	7,770.0	9,054.1	7,530.0	39.6	32.5	-72.33	-1,441.3	-684.5	787.2	729.6	57.57	13.673	
9,500.0	7,770.0	9,154.1	7,530.0	40.8	34.0	-72.33	-1,541.3	-684.5	787.2	726.6	60.60	12.991	
9,600.0	7,770.0	9,254.1	7,530.0	42.0	35.5	-72.33	-1,641.3	-684.5	787.2	723.5	63.65	12.367	
9,700.0	7,770.0	9,354.1	7,530.0	43.3	37.0	-72.33	-1,741.3	-684.5	787.2	720.4	66.74	11.795	
9,800.0	7,770.0	9,454.1	7,530.0	44.6	38.6	-72.33	-1,841.3	-684.5	787.2	717.3	69.85	11.270	
9,900.0	7,770.0	9,554.1	7,530.0	46.0	40.1	-72.33	-1,941.3	-684.5	787.2	714.2	72.98	10.787	
10,000.0	7,770.0	9,654.1	7,530.0	47.4	41.7	-72.33	-2,041.3	-684.5	787.2	711.1	76.12	10.341	
10,100.0	7,770.0	9,754.1	7,530.0	48.7	43.3	-72.33	-2,141.3	-684.5	787.2	707.9	79.29	9.928	
10,200.0	7,770.0	9,854.1	7,530.0	50.2	44.9	-72.33	-2,241.3	-684.5	787.2	704.7	82.46	9.546	
10,300.0	7,770.0	9,954.1	7,530.0	51.6	46.5	-72.33	-2,341.3	-684.5	787.2	701.5	85.66	9.190	
10,400.0	7,770.0	10,054.1	7,530.0	53.1	48.1	-72.33	-2,441.3	-684.5	787.2	698.3	88.86	8.859	
10,500.0	7,770.0	10,154.1	7,530.0	54.6	49.7	-72.33	-2,541.3	-684.5	787.2	695.1	92.07	8.550	
10,600.0	7,770.0	10,254.1	7,530.0	56.1	51.4	-72.33	-2,641.3	-684.5	787.2	691.9	95.29	8.261	
10,700.0	7,770.0	10,354.1	7,530.0	57.6	53.0	-72.33	-2,741.3	-684.5	787.2	688.7	98.52	7.990	
10,800.0	7,770.0	10,454.1	7,530.0	59.1	54.7	-72.33	-2,841.3	-684.5	787.2	685.4	101.76	7.736	
10,900.0	7,770.0	10,554.1	7,530.0	60.6	56.3	-72.33	-2,941.3	-684.5	787.2	682.2	105.00	7.497	
11,000.0	7,770.0	10,654.1	7,530.0	62.2	58.0	-72.33	-3,041.3	-684.5	787.2	678.9	108.25	7.272	
11,100.0	7,770.0	10,754.1	7,530.0	63.7	59.6	-72.33	-3,141.3	-684.5	787.2	675.7	111.51	7.060	
11,200.0	7,770.0	10,854.1	7,530.0	65.3	61.3	-72.33	-3,241.3	-684.5	787.2	672.4	114.77	6.859	
11,300.0	7,770.0	10,954.1	7,530.0	66.9	63.0	-72.33	-3,341.3	-684.5	787.2	669.2	118.03	6.669	
11,400.0	7,770.0	11,054.1	7,530.0	68.5	64.7	-72.33	-3,441.3	-684.5	787.2	665.9	121.30	6.489	
11,500.0	7,770.0	11,154.1	7,530.0	70.1	66.4	-72.33	-3,541.3	-684.5	787.2	662.6	124.58	6.319	
11,600.0	7,770.0	11,254.1	7,530.0	71.7	68.1	-72.33	-3,641.3	-684.5	787.2	659.3	127.85	6.157	
11,700.0	7,770.0	11,354.1	7,530.0	73.3	69.7	-72.33	-3,741.3	-684.5	787.2	656.1	131.13	6.003	
11,800.0	7,770.0	11,454.1	7,530.0	74.9	71.4	-72.33	-3,841.3	-684.5	787.2	652.8	134.42	5.856	
11,900.0	7,770.0	11,554.1	7,530.0	76.5	73.1	-72.33	-3,941.3	-684.5	787.2	649.5	137.70	5.716	
12,000.0	7,770.0	11,654.1	7,530.0	78.1	74.8	-72.33	-4,041.3	-684.5	787.2	646.2	140.99	5.583	
12,100.0	7,770.0	11,754.1	7,530.0	79.8	76.5	-72.33	-4,141.3	-684.5	787.2	642.9	144.29	5.456	
12,200.0	7,770.0	11,854.1	7,530.0	81.4	78.2	-72.33	-4,241.3	-684.5	787.2	639.6	147.58	5.334	
12,300.0	7,770.0	11,954.1	7,530.0	83.0	80.0	-72.33	-4,341.3	-684.5	787.2	636.3	150.88	5.217	
12,400.0	7,770.0	12,054.1	7,530.0	84.7	81.7	-72.33	-4,441.3	-684.5	787.2	633.0	154.18	5.106	
12,500.0	7,770.0	12,154.1	7,530.0	86.3	83.4	-72.33	-4,541.3	-684.5	787.2	629.7	157.48	4.999	
12,600.0	7,770.0	12,254.1	7,530.0	88.0	85.1	-72.33	-4,641.3	-684.5	787.2	626.4	160.78	4.896	
12,700.0	7,770.0	12,354.1	7,530.0	89.7	86.8	-72.33	-4,741.3	-684.5	787.2	623.1	164.08	4.798	
12,800.0	7,770.0	12,454.1	7,530.0	91.3	88.5	-72.33	-4,841.3	-684.5	787.2	619.8	167.39	4.703	
12,900.0	7,770.0	12,554.1	7,530.0	93.0	90.2	-72.33	-4,941.3	-684.5	787.2	616.5	170.70	4.612	
13,000.0	7,770.0	12,654.1	7,530.0	94.7	92.0	-72.33	-5,041.3	-684.5	787.2	613.2	174.00	4.524	
13,100.0	7,770.0	12,754.1	7,530.0	96.3	93.7	-72.33	-5,141.3	-684.5	787.2	609.9	177.31	4.440	
13,200.0	7,770.0	12,854.1	7,530.0	98.0	95.4	-72.33	-5,241.3	-684.5	787.2	606.6	180.63	4.358	
13,300.0	7,770.0	12,954.1	7,530.0	99.7	97.1	-72.33	-5,341.3	-684.5	787.2	603.3	183.94	4.280	
13,400.0	7,770.0	13,054.1	7,530.0	101.4	98.8	-72.33	-5,441.3	-684.5	787.2	599.9	187.25	4.204	
13,500.0	7,770.0	13,154.1	7,530.0	103.1	100.6	-72.33	-5,541.3	-684.5	787.2	596.6	190.57	4.131	
13,600.0	7,770.0	13,254.1	7,530.0	104.7	102.3	-72.33	-5,641.3	-684.5	787.2	593.3	193.88	4.060	
13,700.0	7,770.0	13,354.1	7,530.0	106.4	104.0	-72.33	-5,741.3	-684.5	787.2	590.0	197.20	3.992	
13,800.0	7,770.0	13,454.1	7,530.0	108.1	105.7	-72.33	-5,841.3	-684.5	787.2	586.7	200.52	3.926	
13,900.0	7,770.0	13,554.1	7,530.0	109.8	107.5	-72.33	-5,941.3	-684.5	787.2	583.4	203.84	3.862	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,000.0	7,770.0	13,654.1	7,530.0	111.5	109.2	-72.33	-6,041.3	-684.5	787.2	580.0	207.15	3.800	
14,100.0	7,770.0	13,754.1	7,530.0	113.2	110.9	-72.33	-6,141.3	-684.5	787.2	576.7	210.48	3.740	
14,200.0	7,770.0	13,854.1	7,530.0	114.9	112.7	-72.33	-6,241.3	-684.5	787.2	573.4	213.80	3.682	
14,300.0	7,770.0	13,954.1	7,530.0	116.6	114.4	-72.33	-6,341.3	-684.5	787.2	570.1	217.12	3.626	
14,400.0	7,770.0	14,054.1	7,530.0	118.3	116.1	-72.33	-6,441.3	-684.5	787.2	566.8	220.44	3.571	
14,500.0	7,770.0	14,154.1	7,530.0	120.0	117.9	-72.33	-6,541.3	-684.5	787.2	563.4	223.76	3.518	
14,600.0	7,770.0	14,254.1	7,530.0	121.7	119.6	-72.33	-6,641.3	-684.5	787.2	560.1	227.09	3.466	
14,700.0	7,770.0	14,354.1	7,530.0	123.4	121.3	-72.33	-6,741.3	-684.5	787.2	556.8	230.41	3.416	
14,800.0	7,770.0	14,454.1	7,530.0	125.1	123.1	-72.33	-6,841.3	-684.5	787.2	553.5	233.74	3.368	
14,900.0	7,770.0	14,554.1	7,530.0	126.8	124.8	-72.33	-6,941.3	-684.5	787.2	550.1	237.06	3.321	
15,000.0	7,770.0	14,654.1	7,530.0	128.5	126.5	-72.33	-7,041.3	-684.5	787.2	546.8	240.39	3.275	
15,100.0	7,770.0	14,754.1	7,530.0	130.2	128.3	-72.33	-7,141.3	-684.5	787.2	543.5	243.71	3.230	
15,200.0	7,770.0	14,854.1	7,530.0	132.0	130.0	-72.33	-7,241.3	-684.5	787.2	540.2	247.04	3.186	
15,300.0	7,770.0	14,954.1	7,530.0	133.7	131.7	-72.33	-7,341.3	-684.5	787.2	536.8	250.37	3.144	
15,400.0	7,770.0	15,054.1	7,530.0	135.4	133.5	-72.33	-7,441.3	-684.5	787.2	533.5	253.70	3.103	
15,500.0	7,770.0	15,154.1	7,530.0	137.1	135.2	-72.33	-7,541.3	-684.5	787.2	530.2	257.02	3.063	
15,600.0	7,770.0	15,254.1	7,530.0	138.8	137.0	-72.33	-7,641.3	-684.5	787.2	526.8	260.35	3.024	
15,700.0	7,770.0	15,354.1	7,530.0	140.5	138.7	-72.33	-7,741.3	-684.5	787.2	523.5	263.68	2.985	
15,800.0	7,770.0	15,454.1	7,530.0	142.2	140.4	-72.33	-7,841.3	-684.5	787.2	520.2	267.01	2.948	
15,900.0	7,770.0	15,554.1	7,530.0	144.0	142.2	-72.33	-7,941.3	-684.5	787.2	516.9	270.34	2.912	
16,000.0	7,770.0	15,654.1	7,530.0	145.7	143.9	-72.33	-8,041.3	-684.5	787.2	513.5	273.67	2.876	
16,100.0	7,770.0	15,754.1	7,530.0	147.4	145.7	-72.33	-8,141.3	-684.5	787.2	510.2	277.00	2.842	
16,200.0	7,770.0	15,854.1	7,530.0	149.1	147.4	-72.33	-8,241.3	-684.5	787.2	506.9	280.33	2.808	
16,300.0	7,770.0	15,954.1	7,530.0	150.8	149.1	-72.33	-8,341.3	-684.5	787.2	503.5	283.66	2.775	
16,400.0	7,770.0	16,054.1	7,530.0	152.6	150.9	-72.33	-8,441.3	-684.5	787.2	500.2	287.00	2.743	
16,500.0	7,770.0	16,154.1	7,530.0	154.3	152.6	-72.33	-8,541.3	-684.5	787.2	496.9	290.33	2.711	
16,600.0	7,770.0	16,254.1	7,530.0	156.0	154.4	-72.33	-8,641.3	-684.5	787.2	493.5	293.66	2.681	
16,700.0	7,770.0	16,354.1	7,530.0	157.7	156.1	-72.33	-8,741.3	-684.5	787.2	490.2	296.99	2.651	
16,800.0	7,770.0	16,454.1	7,530.0	159.5	157.8	-72.33	-8,841.3	-684.5	787.2	486.9	300.32	2.621	
16,900.0	7,770.0	16,554.1	7,530.0	161.2	159.6	-72.33	-8,941.3	-684.5	787.2	483.5	303.66	2.592	
17,000.0	7,770.0	16,654.1	7,530.0	162.9	161.3	-72.33	-9,041.3	-684.5	787.2	480.2	306.99	2.564	
17,100.0	7,770.0	16,754.1	7,530.0	164.6	163.1	-72.33	-9,141.3	-684.5	787.2	476.9	310.32	2.537	
17,200.0	7,770.0	16,854.1	7,530.0	166.4	164.8	-72.33	-9,241.3	-684.5	787.2	473.5	313.66	2.510	
17,300.0	7,770.0	16,954.1	7,530.0	168.1	166.6	-72.33	-9,341.3	-684.5	787.2	470.2	316.99	2.483	
17,400.0	7,770.0	17,054.1	7,530.0	169.8	168.3	-72.33	-9,441.3	-684.5	787.2	466.9	320.33	2.457	
17,500.0	7,770.0	17,154.1	7,530.0	171.6	170.0	-72.33	-9,541.3	-684.5	787.2	463.5	323.66	2.432	
17,600.0	7,770.0	17,254.1	7,530.0	173.3	171.8	-72.33	-9,641.3	-684.5	787.2	460.2	326.99	2.407	
17,700.0	7,770.0	17,354.1	7,530.0	175.0	173.5	-72.33	-9,741.3	-684.5	787.2	456.9	330.33	2.383	
17,775.9	7,770.0	17,430.0	7,530.0	176.3	174.9	-72.33	-9,817.2	-684.5	787.2	454.3	332.86	2.365 SF	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.52	-0.4	40.0	40.0				
100.0	100.0	99.0	99.0	0.2	0.2	90.52	-0.4	40.0	40.0	39.7	0.30	132.447	
200.0	200.0	199.0	199.0	0.3	0.3	90.52	-0.4	40.0	40.0	39.4	0.65	61.476	
250.0	250.0	249.0	249.0	0.4	0.4	90.52	-0.4	40.0	40.0	39.2	0.83	48.479	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	165.61	-0.4	40.0	40.2	39.2	1.00	40.231	
400.0	400.0	399.0	399.0	0.7	0.7	166.20	-0.4	40.0	41.9	40.6	1.35	31.079	
500.0	499.9	499.2	499.2	0.9	0.8	167.10	-0.2	39.9	45.1	43.5	1.70	26.585	
600.0	599.8	599.8	599.8	1.1	1.0	167.30	0.8	38.5	48.8	46.8	2.05	23.832	
700.0	699.5	700.5	700.4	1.3	1.2	166.79	2.9	35.6	52.8	50.4	2.40	21.974	
800.0	799.2	801.2	801.0	1.5	1.4	165.74	6.1	31.4	57.0	54.2	2.76	20.658	
900.0	898.6	901.9	901.4	1.7	1.6	164.26	10.3	25.8	61.5	58.4	3.12	19.692	
1,000.0	997.9	1,002.3	1,001.5	2.0	1.8	162.53	15.6	18.9	66.4	62.9	3.50	18.994	
1,100.0	1,096.9	1,102.1	1,100.9	2.3	2.0	161.31	21.0	11.7	72.8	68.9	3.88	18.767	
1,200.0	1,195.7	1,201.8	1,200.1	2.6	2.2	160.68	26.4	4.5	80.8	76.6	4.26	18.954	
1,300.0	1,294.1	1,301.3	1,299.3	2.9	2.5	160.54	31.7	-2.7	90.5	85.8	4.65	19.456	
1,400.0	1,392.3	1,400.7	1,398.2	3.3	2.7	160.74	37.1	-9.8	101.8	96.8	5.04	20.207	
1,462.7	1,453.7	1,462.9	1,460.1	3.5	2.8	161.00	40.5	-14.3	109.7	104.5	5.28	20.784	
1,500.0	1,490.1	1,499.8	1,497.0	3.7	2.9	161.18	42.5	-16.9	114.6	109.2	5.43	21.131	
1,600.0	1,587.9	1,599.0	1,595.7	4.0	3.1	161.59	47.9	-24.1	127.8	122.0	5.82	21.974	
1,700.0	1,685.7	1,698.1	1,694.4	4.4	3.4	161.93	53.2	-31.2	141.0	134.8	6.21	22.710	
1,800.0	1,783.4	1,797.2	1,793.1	4.8	3.6	162.21	58.6	-38.3	154.2	147.6	6.60	23.358	
1,900.0	1,881.2	1,896.3	1,891.9	5.2	3.8	162.45	64.0	-45.5	167.3	160.3	6.99	23.932	
2,000.0	1,979.0	1,995.5	1,990.6	5.6	4.0	162.65	69.3	-52.6	180.5	173.1	7.38	24.444	
2,100.0	2,076.7	2,094.6	2,089.3	6.0	4.3	162.82	74.7	-59.7	193.7	185.9	7.78	24.904	
2,200.0	2,174.5	2,193.7	2,188.0	6.4	4.5	162.98	80.1	-66.9	206.9	198.7	8.17	25.320	
2,300.0	2,272.3	2,292.8	2,286.8	6.8	4.7	163.11	85.4	-74.0	220.1	211.5	8.56	25.697	
2,400.0	2,370.0	2,392.0	2,385.5	7.3	5.0	163.23	90.8	-81.1	233.3	224.3	8.96	26.040	
2,500.0	2,467.8	2,491.1	2,484.2	7.7	5.2	163.33	96.2	-88.3	246.4	237.1	9.35	26.355	
2,600.0	2,565.6	2,590.2	2,582.9	8.1	5.4	163.43	101.5	-95.4	259.6	249.9	9.74	26.644	
2,700.0	2,663.4	2,689.4	2,681.7	8.5	5.7	163.52	106.9	-102.5	272.8	262.7	10.14	26.910	
2,800.0	2,761.1	2,788.5	2,780.4	8.9	5.9	163.59	112.3	-109.7	286.0	275.5	10.53	27.156	
2,900.0	2,858.9	2,887.6	2,879.1	9.3	6.1	163.66	117.6	-116.8	299.2	288.3	10.93	27.384	
3,000.0	2,956.7	2,986.7	2,977.8	9.7	6.4	163.73	123.0	-123.9	312.4	301.1	11.32	27.596	
3,100.0	3,054.4	3,085.9	3,076.5	10.1	6.6	163.79	128.4	-131.1	325.6	313.9	11.71	27.794	
3,200.0	3,152.2	3,185.0	3,175.3	10.5	6.8	163.84	133.7	-138.2	338.8	326.7	12.11	27.978	
3,300.0	3,250.0	3,284.1	3,274.0	10.9	7.0	163.90	139.1	-145.3	352.0	339.5	12.50	28.151	
3,400.0	3,347.7	3,383.2	3,372.7	11.3	7.3	163.94	144.5	-152.5	365.2	352.3	12.90	28.314	
3,500.0	3,445.5	3,482.4	3,471.4	11.7	7.5	163.99	149.8	-159.6	378.3	365.1	13.29	28.466	
3,600.0	3,543.3	3,581.5	3,570.2	12.2	7.7	164.03	155.2	-166.7	391.5	377.9	13.69	28.610	
3,700.0	3,641.0	3,680.6	3,668.9	12.6	8.0	164.07	160.6	-173.9	404.7	390.7	14.08	28.745	
3,800.0	3,738.8	3,779.7	3,767.6	13.0	8.2	164.10	165.9	-181.0	417.9	403.5	14.47	28.874	
3,900.0	3,836.6	3,878.9	3,866.3	13.4	8.4	164.14	171.3	-188.1	431.1	416.3	14.87	28.995	
4,000.0	3,934.3	3,978.0	3,965.0	13.8	8.7	164.17	176.7	-195.3	444.3	429.0	15.26	29.110	
4,100.0	4,032.1	4,077.1	4,063.8	14.2	8.9	164.20	182.0	-202.4	457.5	441.8	15.66	29.219	
4,200.0	4,129.9	4,176.2	4,162.5	14.6	9.1	164.23	187.4	-209.5	470.7	454.6	16.05	29.323	
4,300.0	4,227.7	4,275.4	4,261.2	15.0	9.4	164.25	192.8	-216.7	483.9	467.4	16.45	29.422	
4,400.0	4,325.4	4,374.5	4,359.9	15.4	9.6	164.28	198.1	-223.8	497.1	480.2	16.84	29.516	
4,500.0	4,423.2	4,473.6	4,458.7	15.9	9.8	164.30	203.5	-230.9	510.3	493.0	17.24	29.605	
4,600.0	4,521.0	4,572.7	4,557.4	16.3	10.1	164.33	208.9	-238.1	523.5	505.8	17.63	29.691	
4,700.0	4,618.7	4,671.9	4,656.1	16.7	10.3	164.35	214.2	-245.2	536.7	518.6	18.03	29.773	
4,800.0	4,716.5	4,771.0	4,754.8	17.1	10.5	164.37	219.6	-252.3	549.9	531.4	18.42	29.852	
4,900.0	4,814.3	4,870.1	4,853.6	17.5	10.8	164.39	224.9	-259.5	563.1	544.2	18.81	29.927	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,912.0	4,969.2	4,952.3	17.9	11.0	164.41	230.3	-266.6	576.2	557.0	19.21	29.999	
5,100.0	5,009.8	5,068.4	5,051.0	18.3	11.2	164.42	235.7	-273.7	589.4	569.8	19.60	30.068	
5,200.0	5,107.6	5,167.5	5,149.7	18.7	11.5	164.44	241.0	-280.9	602.6	582.6	20.00	30.134	
5,300.0	5,205.3	5,266.6	5,248.4	19.2	11.7	164.46	246.4	-288.0	615.8	595.4	20.39	30.198	
5,400.0	5,303.1	5,365.7	5,347.2	19.6	11.9	164.47	251.8	-295.1	629.0	608.2	20.79	30.259	
5,500.0	5,400.9	5,464.9	5,445.9	20.0	12.2	164.49	257.1	-302.3	642.2	621.0	21.18	30.318	
5,600.0	5,498.6	5,564.0	5,544.6	20.4	12.4	164.50	262.5	-309.4	655.4	633.8	21.58	30.375	
5,700.0	5,596.4	5,663.1	5,643.3	20.8	12.6	164.52	267.9	-316.5	668.6	646.6	21.97	30.430	
5,800.0	5,694.2	5,762.2	5,742.1	21.2	12.9	164.53	273.2	-323.7	681.8	659.4	22.37	30.483	
5,900.0	5,791.9	5,861.4	5,840.8	21.6	13.1	164.54	278.6	-330.8	695.0	672.2	22.76	30.534	
6,000.0	5,889.7	5,960.5	5,939.5	22.0	13.3	164.56	284.0	-337.9	708.2	685.0	23.16	30.583	
6,100.0	5,987.5	6,059.6	6,038.2	22.4	13.6	164.57	289.3	-345.1	721.4	697.8	23.55	30.630	
6,200.0	6,085.3	6,158.7	6,137.0	22.9	13.8	164.58	294.7	-352.2	734.6	710.6	23.95	30.676	
6,300.0	6,183.0	6,257.9	6,235.7	23.3	14.0	164.59	300.1	-359.3	747.8	723.4	24.34	30.721	
6,400.0	6,280.8	6,357.0	6,334.4	23.7	14.3	164.60	305.4	-366.5	761.0	736.2	24.74	30.764	
6,500.0	6,378.6	6,456.1	6,433.1	24.1	14.5	164.61	310.8	-373.6	774.2	749.0	25.13	30.806	
6,600.0	6,476.3	6,555.2	6,531.8	24.5	14.7	164.62	316.2	-380.7	787.4	761.8	25.53	30.846	
6,700.0	6,574.1	6,654.4	6,630.6	24.9	14.9	164.63	321.5	-387.9	800.6	774.6	25.92	30.885	
6,800.0	6,671.9	6,753.5	6,729.3	25.3	15.2	164.64	326.9	-395.0	813.7	787.4	26.31	30.923	
6,900.0	6,769.6	6,852.6	6,828.0	25.7	15.4	164.65	332.3	-402.1	826.9	800.2	26.71	30.960	
7,000.0	6,867.4	6,951.8	6,926.7	26.2	15.6	164.66	337.6	-409.3	840.1	813.0	27.10	30.996	
7,100.0	6,965.2	7,050.9	7,025.5	26.6	15.9	164.67	343.0	-416.4	853.3	825.8	27.50	31.033	
7,167.0	7,030.7	7,117.1	7,091.5	26.8	16.0	164.93	342.7	-421.1	862.2	834.5	27.65	31.181	
7,200.0	7,063.0	7,149.4	7,123.6	27.0	16.0	177.90	340.3	-423.5	866.6	839.0	27.60	31.401	
7,250.0	7,111.9	7,198.1	7,171.7	27.2	16.1	-162.44	334.0	-426.9	873.2	845.7	27.48	31.777	
7,300.0	7,160.6	7,246.4	7,219.0	27.3	16.1	-145.84	324.6	-430.3	879.9	852.6	27.34	32.180	
7,350.0	7,208.9	7,294.5	7,265.3	27.5	16.1	-133.36	312.0	-433.6	886.6	859.4	27.20	32.595	
7,400.0	7,256.5	7,342.2	7,310.3	27.6	16.1	-124.25	296.5	-436.8	893.2	866.1	27.06	33.008	
7,450.0	7,303.1	7,389.7	7,354.0	27.8	16.1	-117.51	278.1	-439.8	899.7	872.7	26.93	33.404	
7,500.0	7,348.7	7,437.0	7,396.1	27.9	16.1	-112.39	256.9	-442.8	906.0	879.2	26.83	33.768	
7,550.0	7,392.8	7,484.0	7,436.6	28.0	16.1	-108.37	233.1	-445.6	912.2	885.5	26.76	34.087	
7,600.0	7,435.4	7,530.9	7,475.3	28.1	16.0	-105.15	206.9	-448.3	918.2	891.5	26.73	34.349	
7,650.0	7,476.2	7,577.5	7,512.0	28.2	16.0	-102.50	178.2	-450.9	924.0	897.3	26.75	34.544	
7,700.0	7,515.1	7,624.0	7,546.7	28.3	16.0	-100.29	147.4	-453.3	929.5	902.7	26.81	34.667	
7,750.0	7,551.7	7,670.3	7,579.2	28.4	16.0	-98.42	114.5	-455.5	934.8	907.8	26.93	34.713	
7,800.0	7,586.0	7,716.6	7,609.5	28.5	16.1	-96.83	79.6	-457.6	939.7	912.6	27.10	34.679	
7,850.0	7,617.8	7,762.6	7,637.3	28.6	16.1	-95.47	43.0	-459.4	944.2	916.9	27.33	34.555	
7,900.0	7,646.9	7,808.6	7,662.7	28.7	16.2	-94.31	4.7	-461.1	948.4	920.9	27.58	34.388	
7,950.0	7,673.1	7,854.5	7,685.6	28.8	16.3	-93.32	-35.1	-462.6	952.3	924.4	27.90	34.126	
8,000.0	7,696.5	7,900.0	7,705.7	29.0	16.5	-92.48	-75.9	-463.9	955.7	927.4	28.27	33.802	
8,050.0	7,716.7	7,946.1	7,723.4	29.1	16.6	-91.78	-118.4	-465.1	958.7	930.0	28.69	33.409	
8,100.0	7,733.9	7,991.8	7,738.2	29.3	16.8	-91.21	-161.6	-466.0	961.2	932.1	29.16	32.963	
8,150.0	7,747.7	8,037.4	7,750.3	29.4	17.1	-90.76	-205.6	-466.7	963.3	933.7	29.67	32.469	
8,200.0	7,758.3	8,083.1	7,759.5	29.6	17.3	-90.42	-250.3	-467.2	965.0	934.7	30.22	31.934	
8,250.0	7,765.5	8,128.7	7,765.8	29.8	17.6	-90.20	-295.5	-467.5	966.1	935.3	30.80	31.363	
8,300.0	7,769.3	8,174.3	7,769.3	30.0	18.0	-90.08	-341.0	-467.6	966.8	935.4	31.43	30.763	
8,330.9	7,770.0	8,202.6	7,770.0	30.2	18.2	-90.06	-369.2	-467.6	967.0	935.2	31.83	30.383	
8,400.0	7,770.0	8,271.3	7,770.0	30.5	18.8	-90.06	-437.9	-467.3	967.3	934.1	33.16	29.169	
8,500.0	7,770.0	8,371.3	7,770.0	31.1	19.7	-90.06	-537.9	-467.0	967.6	932.3	35.28	27.424	
8,600.0	7,770.0	8,471.3	7,770.0	31.8	20.7	-90.06	-637.9	-466.6	968.0	930.3	37.61	25.734	
8,700.0	7,770.0	8,571.3	7,770.0	32.5	21.9	-90.06	-737.9	-466.3	968.3	928.2	40.12	24.138	
8,800.0	7,770.0	8,671.3	7,770.0	33.3	23.1	-90.06	-837.9	-465.9	968.7	925.9	42.76	22.654	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,900.0	7,770.0	8,771.3	7,770.0	34.2	24.4	-90.06	-937.9	-465.6	969.0	923.5	45.52	21.287	
9,000.0	7,770.0	8,871.3	7,770.0	35.2	25.7	-90.06	-1,037.9	-465.2	969.3	921.0	48.38	20.037	
9,100.0	7,770.0	8,971.3	7,770.0	36.2	27.1	-90.06	-1,137.9	-464.9	969.7	918.4	51.32	18.896	
9,200.0	7,770.0	9,071.3	7,770.0	37.3	28.5	-90.06	-1,237.9	-464.5	970.0	915.7	54.32	17.857	
9,300.0	7,770.0	9,171.3	7,770.0	38.4	30.0	-90.06	-1,337.9	-464.2	970.4	913.0	57.39	16.910	
9,400.0	7,770.0	9,271.3	7,770.0	39.6	31.5	-90.06	-1,437.9	-463.8	970.7	910.2	60.50	16.046	
9,500.0	7,770.0	9,371.3	7,770.0	40.8	33.0	-90.06	-1,537.9	-463.5	971.1	907.4	63.65	15.257	
9,600.0	7,770.0	9,471.3	7,770.0	42.0	34.5	-90.06	-1,637.9	-463.1	971.4	904.6	66.84	14.534	
9,700.0	7,770.0	9,571.3	7,770.0	43.3	36.1	-90.06	-1,737.9	-462.8	971.8	901.7	70.06	13.871	
9,800.0	7,770.0	9,671.3	7,770.0	44.6	37.6	-90.06	-1,837.9	-462.4	972.1	898.8	73.30	13.262	
9,900.0	7,770.0	9,771.3	7,770.0	46.0	39.2	-90.06	-1,937.9	-462.1	972.5	895.9	76.57	12.700	
10,000.0	7,770.0	9,871.3	7,770.0	47.4	40.8	-90.06	-2,037.9	-461.7	972.8	893.0	79.86	12.182	
10,100.0	7,770.0	9,971.3	7,770.0	48.7	42.4	-90.06	-2,137.9	-461.4	973.2	890.0	83.17	11.701	
10,200.0	7,770.0	10,071.3	7,770.0	50.2	44.1	-90.06	-2,237.9	-461.0	973.5	887.0	86.49	11.256	
10,300.0	7,770.0	10,171.3	7,770.0	51.6	45.7	-90.06	-2,337.9	-460.7	973.9	884.1	89.83	10.842	
10,400.0	7,770.0	10,271.3	7,770.0	53.1	47.4	-90.06	-2,437.9	-460.3	974.2	881.1	93.18	10.456	
10,500.0	7,770.0	10,371.3	7,770.0	54.6	49.0	-90.06	-2,537.9	-460.0	974.6	878.0	96.54	10.095	
10,600.0	7,770.0	10,471.3	7,770.0	56.1	50.7	-90.06	-2,637.9	-459.6	974.9	875.0	99.91	9.758	
10,700.0	7,770.0	10,571.3	7,770.0	57.6	52.3	-90.06	-2,737.9	-459.3	975.3	872.0	103.29	9.442	
10,800.0	7,770.0	10,671.3	7,770.0	59.1	54.0	-90.06	-2,837.9	-458.9	975.6	869.0	106.68	9.146	
10,900.0	7,770.0	10,771.3	7,770.0	60.6	55.7	-90.06	-2,937.9	-458.6	976.0	865.9	110.07	8.867	
11,000.0	7,770.0	10,871.3	7,770.0	62.2	57.4	-90.06	-3,037.9	-458.2	976.3	862.9	113.48	8.604	
11,100.0	7,770.0	10,971.3	7,770.0	63.7	59.0	-90.06	-3,137.9	-457.9	976.7	859.8	116.88	8.356	
11,200.0	7,770.0	11,071.3	7,770.0	65.3	60.7	-90.06	-3,237.9	-457.5	977.0	856.7	120.30	8.122	
11,300.0	7,770.0	11,171.3	7,770.0	66.9	62.4	-90.06	-3,337.9	-457.2	977.4	853.7	123.72	7.900	
11,400.0	7,770.0	11,271.3	7,770.0	68.5	64.1	-90.06	-3,437.9	-456.8	977.7	850.6	127.14	7.690	
11,500.0	7,770.0	11,371.3	7,770.0	70.1	65.8	-90.06	-3,537.9	-456.5	978.1	847.5	130.57	7.491	
11,600.0	7,770.0	11,471.3	7,770.0	71.7	67.5	-90.06	-3,637.9	-456.1	978.4	844.4	134.01	7.301	
11,700.0	7,770.0	11,571.3	7,770.0	73.3	69.2	-90.06	-3,737.9	-455.8	978.8	841.3	137.44	7.121	
11,800.0	7,770.0	11,671.3	7,770.0	74.9	70.9	-90.06	-3,837.9	-455.4	979.1	838.2	140.88	6.950	
11,900.0	7,770.0	11,771.3	7,770.0	76.5	72.6	-90.06	-3,937.9	-455.1	979.5	835.1	144.33	6.787	
12,000.0	7,770.0	11,871.3	7,770.0	78.1	74.3	-90.06	-4,037.9	-454.7	979.8	832.1	147.77	6.631	
12,100.0	7,770.0	11,971.3	7,770.0	79.8	76.1	-90.06	-4,137.9	-454.4	980.2	829.0	151.22	6.482	
12,200.0	7,770.0	12,071.3	7,770.0	81.4	77.8	-90.06	-4,237.9	-454.0	980.5	825.8	154.68	6.339	
12,300.0	7,770.0	12,171.3	7,770.0	83.0	79.5	-90.06	-4,337.9	-453.7	980.9	822.7	158.13	6.203	
12,400.0	7,770.0	12,271.3	7,770.0	84.7	81.2	-90.06	-4,437.9	-453.3	981.2	819.6	161.59	6.072	
12,500.0	7,770.0	12,371.3	7,770.0	86.3	82.9	-90.06	-4,537.9	-453.0	981.6	816.5	165.05	5.947	
12,600.0	7,770.0	12,471.3	7,770.0	88.0	84.6	-90.06	-4,637.9	-452.6	981.9	813.4	168.51	5.827	
12,700.0	7,770.0	12,571.3	7,770.0	89.7	86.4	-90.06	-4,737.9	-452.3	982.3	810.3	171.97	5.712	
12,800.0	7,770.0	12,671.3	7,770.0	91.3	88.1	-90.06	-4,837.9	-451.9	982.6	807.2	175.43	5.601	
12,900.0	7,770.0	12,771.3	7,770.0	93.0	89.8	-90.06	-4,937.9	-451.6	983.0	804.1	178.90	5.494	
13,000.0	7,770.0	12,871.3	7,770.0	94.7	91.5	-90.06	-5,037.9	-451.3	983.3	800.9	182.37	5.392	
13,100.0	7,770.0	12,971.3	7,770.0	96.3	93.3	-90.06	-5,137.9	-450.9	983.7	797.8	185.84	5.293	
13,200.0	7,770.0	13,071.3	7,770.0	98.0	95.0	-90.06	-5,237.9	-450.6	984.0	794.7	189.31	5.198	
13,300.0	7,770.0	13,171.3	7,770.0	99.7	96.7	-90.06	-5,337.9	-450.2	984.4	791.6	192.78	5.106	
13,400.0	7,770.0	13,271.3	7,770.0	101.4	98.5	-90.06	-5,437.9	-449.9	984.7	788.5	196.26	5.018	
13,500.0	7,770.0	13,371.3	7,770.0	103.1	100.2	-90.06	-5,537.9	-449.5	985.1	785.3	199.73	4.932	
13,600.0	7,770.0	13,471.3	7,770.0	104.7	101.9	-90.06	-5,637.9	-449.2	985.4	782.2	203.21	4.849	
13,700.0	7,770.0	13,571.3	7,770.0	106.4	103.6	-90.06	-5,737.9	-448.8	985.8	779.1	206.68	4.769	
13,800.0	7,770.0	13,671.3	7,770.0	108.1	105.4	-90.06	-5,837.9	-448.5	986.1	775.9	210.16	4.692	
13,900.0	7,770.0	13,771.3	7,770.0	109.8	107.1	-90.06	-5,937.9	-448.1	986.5	772.8	213.64	4.617	
14,000.0	7,770.0	13,871.3	7,770.0	111.5	108.8	-90.06	-6,037.9	-447.8	986.8	769.7	217.12	4.545	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,100.0	7,770.0	13,971.3	7,770.0	113.2	110.6	-90.06	-6,137.9	-447.4	987.2	766.6	220.60	4.475	
14,200.0	7,770.0	14,071.3	7,770.0	114.9	112.3	-90.06	-6,237.9	-447.1	987.5	763.4	224.08	4.407	
14,300.0	7,770.0	14,171.3	7,770.0	116.6	114.1	-90.06	-6,337.9	-446.7	987.9	760.3	227.57	4.341	
14,400.0	7,770.0	14,271.3	7,770.0	118.3	115.8	-90.06	-6,437.9	-446.4	988.2	757.2	231.05	4.277	
14,500.0	7,770.0	14,371.3	7,770.0	120.0	117.5	-90.06	-6,537.9	-446.0	988.6	754.0	234.53	4.215	
14,600.0	7,770.0	14,471.3	7,770.0	121.7	119.3	-90.06	-6,637.8	-445.7	988.9	750.9	238.02	4.155	
14,700.0	7,770.0	14,571.3	7,770.0	123.4	121.0	-90.06	-6,737.8	-445.3	989.3	747.8	241.50	4.096	
14,800.0	7,770.0	14,671.3	7,770.0	125.1	122.7	-90.06	-6,837.8	-445.0	989.6	744.6	244.99	4.039	
14,900.0	7,770.0	14,771.3	7,770.0	126.8	124.5	-90.06	-6,937.8	-444.6	990.0	741.5	248.48	3.984	
15,000.0	7,770.0	14,871.3	7,770.0	128.5	126.2	-90.06	-7,037.8	-444.3	990.3	738.3	251.96	3.930	
15,100.0	7,770.0	14,971.3	7,770.0	130.2	128.0	-90.06	-7,137.8	-443.9	990.7	735.2	255.45	3.878	
15,200.0	7,770.0	15,071.3	7,770.0	132.0	129.7	-90.06	-7,237.8	-443.6	991.0	732.1	258.94	3.827	
15,300.0	7,770.0	15,171.3	7,770.0	133.7	131.4	-90.06	-7,337.8	-443.2	991.4	728.9	262.43	3.778	
15,400.0	7,770.0	15,271.3	7,770.0	135.4	133.2	-90.06	-7,437.8	-442.9	991.7	725.8	265.92	3.729	
15,500.0	7,770.0	15,371.3	7,770.0	137.1	134.9	-90.06	-7,537.8	-442.5	992.0	722.6	269.41	3.682	
15,600.0	7,770.0	15,471.3	7,770.0	138.8	136.7	-90.06	-7,637.8	-442.2	992.4	719.5	272.90	3.637	
15,700.0	7,770.0	15,571.3	7,770.0	140.5	138.4	-90.06	-7,737.8	-441.8	992.7	716.4	276.39	3.592	
15,800.0	7,770.0	15,671.3	7,770.0	142.2	140.1	-90.06	-7,837.8	-441.5	993.1	713.2	279.88	3.548	
15,900.0	7,770.0	15,771.3	7,770.0	144.0	141.9	-90.06	-7,937.8	-441.1	993.4	710.1	283.37	3.506	
16,000.0	7,770.0	15,871.3	7,770.0	145.7	143.6	-90.06	-8,037.8	-440.8	993.8	706.9	286.86	3.464	
16,100.0	7,770.0	15,971.3	7,770.0	147.4	145.4	-90.06	-8,137.8	-440.4	994.1	703.8	290.36	3.424	
16,200.0	7,770.0	16,071.3	7,770.0	149.1	147.1	-90.06	-8,237.8	-440.1	994.5	700.6	293.85	3.384	
16,300.0	7,770.0	16,171.2	7,770.0	150.8	148.9	-90.06	-8,337.8	-439.7	994.8	697.5	297.34	3.346	
16,400.0	7,770.0	16,271.2	7,770.0	152.6	150.6	-90.06	-8,437.8	-439.4	995.2	694.4	300.84	3.308	
16,500.0	7,770.0	16,371.2	7,770.0	154.3	152.4	-90.06	-8,537.8	-439.0	995.5	691.2	304.33	3.271	
16,600.0	7,770.0	16,471.2	7,770.0	156.0	154.1	-90.06	-8,637.8	-438.7	995.9	688.1	307.82	3.235	
16,700.0	7,770.0	16,571.2	7,770.0	157.7	155.8	-90.06	-8,737.8	-438.3	996.2	684.9	311.32	3.200	
16,800.0	7,770.0	16,671.2	7,770.0	159.5	157.6	-90.06	-8,837.8	-438.0	996.6	681.8	314.81	3.166	
16,900.0	7,770.0	16,771.2	7,770.0	161.2	159.3	-90.06	-8,937.8	-437.6	996.9	678.6	318.31	3.132	
17,000.0	7,770.0	16,871.2	7,770.0	162.9	161.1	-90.06	-9,037.8	-437.3	997.3	675.5	321.80	3.099	
17,100.0	7,770.0	16,971.2	7,770.0	164.6	162.8	-90.06	-9,137.8	-436.9	997.6	672.3	325.30	3.067	
17,200.0	7,770.0	17,071.2	7,770.0	166.4	164.6	-90.06	-9,237.8	-436.6	998.0	669.2	328.80	3.035	
17,300.0	7,770.0	17,171.2	7,770.0	168.1	166.3	-90.06	-9,337.8	-436.2	998.3	666.0	332.29	3.004	
17,400.0	7,770.0	17,271.2	7,770.0	169.8	168.1	-90.06	-9,437.8	-435.9	998.7	662.9	335.79	2.974	
17,500.0	7,770.0	17,371.2	7,770.0	171.6	169.8	-90.06	-9,537.8	-435.5	999.0	659.7	339.28	2.945	
17,600.0	7,770.0	17,471.2	7,770.0	173.3	171.5	-90.06	-9,637.8	-435.2	999.4	656.6	342.78	2.916	
17,700.0	7,770.0	17,571.2	7,770.0	175.0	173.3	-90.06	-9,737.8	-434.8	999.7	653.5	346.28	2.887	
17,775.9	7,770.0	17,647.1	7,770.0	176.3	174.6	-90.06	-9,813.7	-434.6	1,000.0	651.1	348.93	2.866	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.42	-0.4	50.1	50.1				
100.0	100.0	99.0	99.0	0.2	0.2	90.42	-0.4	50.1	50.1	49.8	0.30	165.788	
200.0	200.0	199.0	199.0	0.3	0.3	90.42	-0.4	50.1	50.1	49.4	0.65	76.951	
250.0	250.0	249.0	249.0	0.4	0.4	90.42	-0.4	50.1	50.1	49.3	0.83	60.683	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	165.49	-0.4	50.1	50.3	49.3	1.00	50.304	
400.0	400.0	399.0	399.0	0.7	0.7	165.97	-0.4	50.1	52.0	50.6	1.35	38.546	
500.0	499.9	498.9	498.9	0.9	0.8	166.84	-0.4	50.1	55.4	53.7	1.70	32.626	
600.0	599.8	599.2	599.2	1.1	1.0	167.22	0.4	49.8	60.1	58.1	2.05	29.366	
700.0	699.5	699.5	699.5	1.3	1.2	166.50	2.8	48.7	65.8	63.4	2.40	27.428	
800.0	799.2	799.8	799.6	1.5	1.4	164.95	6.9	47.0	72.5	69.8	2.76	26.288	
900.0	898.6	899.7	899.4	1.7	1.6	163.01	12.3	44.7	80.4	77.3	3.13	25.713	
1,000.0	997.9	999.2	998.7	2.0	1.8	161.63	17.8	42.4	89.9	86.4	3.50	25.689	
1,100.0	1,096.9	1,098.6	1,097.9	2.3	2.0	160.84	23.4	40.0	101.1	97.2	3.88	26.072	
1,200.0	1,195.7	1,197.7	1,196.9	2.6	2.2	160.49	28.9	37.7	113.9	109.6	4.26	26.753	
1,300.0	1,294.1	1,296.7	1,295.6	2.9	2.4	160.46	34.5	35.3	128.4	123.7	4.64	27.661	
1,400.0	1,392.3	1,395.4	1,394.2	3.3	2.5	160.66	40.0	33.0	144.5	139.4	5.02	28.749	
1,462.7	1,453.7	1,457.1	1,455.8	3.5	2.7	160.86	43.5	31.5	155.4	150.1	5.27	29.510	
1,500.0	1,490.1	1,493.8	1,492.4	3.7	2.7	161.01	45.5	30.6	162.1	156.6	5.41	29.951	
1,600.0	1,587.9	1,592.2	1,590.6	4.0	2.9	161.36	51.0	28.3	180.0	174.2	5.80	31.022	
1,700.0	1,685.7	1,690.6	1,688.8	4.4	3.1	161.65	56.5	25.9	197.9	191.7	6.19	31.955	
1,800.0	1,783.4	1,788.9	1,787.0	4.8	3.3	161.89	62.0	23.6	215.9	209.3	6.59	32.775	
1,900.0	1,881.2	1,887.3	1,885.2	5.2	3.5	162.09	67.5	21.3	233.8	226.8	6.98	33.501	
2,000.0	1,979.0	1,985.7	1,983.4	5.6	3.7	162.26	73.0	18.9	251.8	244.4	7.37	34.148	
2,100.0	2,076.7	2,084.1	2,081.6	6.0	3.9	162.41	78.5	16.6	269.7	261.9	7.77	34.728	
2,200.0	2,174.5	2,182.4	2,179.7	6.4	4.1	162.55	84.1	14.2	287.7	279.5	8.16	35.252	
2,300.0	2,272.3	2,280.8	2,277.9	6.8	4.3	162.66	89.6	11.9	305.6	297.0	8.55	35.726	
2,400.0	2,370.0	2,379.2	2,376.1	7.3	4.5	162.77	95.1	9.6	323.6	314.6	8.95	36.158	
2,500.0	2,467.8	2,477.5	2,474.3	7.7	4.7	162.86	100.6	7.2	341.5	332.2	9.34	36.553	
2,600.0	2,565.6	2,575.9	2,572.5	8.1	4.9	162.94	106.1	4.9	359.5	349.7	9.74	36.915	
2,700.0	2,663.4	2,674.3	2,670.7	8.5	5.1	163.02	111.6	2.5	377.4	367.3	10.13	37.249	
2,800.0	2,761.1	2,772.7	2,768.9	8.9	5.3	163.08	117.1	0.2	395.4	384.8	10.53	37.557	
2,900.0	2,858.9	2,871.0	2,867.1	9.3	5.5	163.15	122.6	-2.1	413.3	402.4	10.92	37.843	
3,000.0	2,956.7	2,969.4	2,965.3	9.7	5.7	163.20	128.1	-4.5	431.3	420.0	11.32	38.109	
3,100.0	3,054.4	3,067.8	3,063.5	10.1	5.9	163.26	133.6	-6.8	449.2	437.5	11.71	38.356	
3,200.0	3,152.2	3,166.2	3,161.7	10.5	6.1	163.31	139.1	-9.1	467.2	455.1	12.11	38.587	
3,300.0	3,250.0	3,264.5	3,259.9	10.9	6.3	163.35	144.6	-11.5	485.1	472.6	12.50	38.803	
3,400.0	3,347.7	3,362.9	3,358.0	11.3	6.5	163.39	150.1	-13.8	503.1	490.2	12.90	39.006	
3,500.0	3,445.5	3,461.3	3,456.2	11.7	6.7	163.43	155.6	-16.2	521.1	507.8	13.29	39.196	
3,600.0	3,543.3	3,559.7	3,554.4	12.2	6.9	163.47	161.1	-18.5	539.0	525.3	13.69	39.376	
3,700.0	3,641.0	3,658.0	3,652.6	12.6	7.1	163.50	166.7	-20.8	557.0	542.9	14.08	39.545	
3,800.0	3,738.8	3,756.4	3,750.8	13.0	7.3	163.53	172.2	-23.2	574.9	560.4	14.48	39.705	
3,900.0	3,836.6	3,854.8	3,849.0	13.4	7.5	163.56	177.7	-25.5	592.9	578.0	14.88	39.856	
4,000.0	3,934.3	3,953.2	3,947.2	13.8	7.7	163.59	183.2	-27.9	610.8	595.6	15.27	40.000	
4,100.0	4,032.1	4,051.5	4,045.4	14.2	7.9	163.62	188.7	-30.2	628.8	613.1	15.67	40.136	
4,200.0	4,129.9	4,149.9	4,143.6	14.6	8.1	163.64	194.2	-32.5	646.8	630.7	16.06	40.265	
4,300.0	4,227.7	4,248.3	4,241.8	15.0	8.3	163.67	199.7	-34.9	664.7	648.3	16.46	40.388	
4,400.0	4,325.4	4,346.7	4,340.0	15.4	8.5	163.69	205.2	-37.2	682.7	665.8	16.85	40.505	
4,500.0	4,423.2	4,445.0	4,438.2	15.9	8.7	163.71	210.7	-39.5	700.6	683.4	17.25	40.617	
4,600.0	4,521.0	4,543.4	4,536.3	16.3	8.9	163.73	216.2	-41.9	718.6	700.9	17.65	40.723	
4,700.0	4,618.7	4,641.8	4,634.5	16.7	9.1	163.75	221.7	-44.2	736.5	718.5	18.04	40.825	
4,800.0	4,716.5	4,740.2	4,732.7	17.1	9.3	163.77	227.2	-46.6	754.5	736.1	18.44	40.923	
4,900.0	4,814.3	4,838.5	4,830.9	17.5	9.5	163.79	232.7	-48.9	772.5	753.6	18.83	41.016	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,912.0	4,936.9	4,929.1	17.9	9.7	163.80	238.2	-51.2	790.4	771.2	19.23	41.106	
5,100.0	5,009.8	5,035.3	5,027.3	18.3	9.9	163.82	243.7	-53.6	808.4	788.8	19.62	41.192	
5,200.0	5,107.6	5,133.6	5,125.5	18.7	10.1	163.84	249.2	-55.9	826.3	806.3	20.02	41.274	
5,300.0	5,205.3	5,232.0	5,223.7	19.2	10.3	163.85	254.8	-58.3	844.3	823.9	20.42	41.353	
5,400.0	5,303.1	5,330.4	5,321.9	19.6	10.5	163.86	260.3	-60.6	862.3	841.4	20.81	41.429	
5,500.0	5,400.9	5,428.8	5,420.1	20.0	10.7	163.88	265.8	-62.9	880.2	859.0	21.21	41.503	
5,600.0	5,498.6	5,527.1	5,518.3	20.4	10.9	163.89	271.3	-65.3	898.2	876.6	21.60	41.573	
5,700.0	5,596.4	5,625.5	5,616.5	20.8	11.1	163.90	276.8	-67.6	916.1	894.1	22.00	41.641	
5,800.0	5,694.2	5,723.9	5,714.7	21.2	11.3	163.91	282.3	-69.9	934.1	911.7	22.40	41.707	
5,900.0	5,791.9	5,822.3	5,812.8	21.6	11.5	163.93	287.8	-72.3	952.1	929.3	22.79	41.770	
6,000.0	5,889.7	5,920.6	5,911.0	22.0	11.7	163.94	293.3	-74.6	970.0	946.8	23.19	41.831	
6,100.0	5,987.5	6,019.0	6,009.2	22.4	11.9	163.95	298.8	-77.0	988.0	964.4	23.58	41.890	
6,200.0	6,085.3	6,117.4	6,107.4	22.9	12.1	163.96	304.3	-79.3	1,005.9	981.9	23.98	41.947	
6,300.0	6,183.0	6,215.8	6,205.6	23.3	12.3	163.97	309.8	-81.6	1,023.9	999.5	24.38	42.003	
6,400.0	6,280.8	6,314.1	6,303.8	23.7	12.5	163.98	315.3	-84.0	1,041.8	1,017.1	24.77	42.056	
6,500.0	6,378.6	6,412.5	6,402.0	24.1	12.7	163.99	320.8	-86.3	1,059.8	1,034.6	25.17	42.108	
6,600.0	6,476.3	6,510.9	6,500.2	24.5	12.9	164.00	326.3	-88.7	1,077.8	1,052.2	25.56	42.158	
6,700.0	6,574.1	6,609.3	6,598.4	24.9	13.1	164.00	331.8	-91.0	1,095.7	1,069.8	25.96	42.207	
6,800.0	6,671.9	6,707.6	6,696.6	25.3	13.3	164.01	337.4	-93.3	1,113.7	1,087.3	26.36	42.254	
6,900.0	6,769.6	6,806.7	6,795.4	25.7	13.5	164.04	342.6	-95.7	1,131.6	1,104.9	26.74	42.313	
7,000.0	6,867.4	6,907.1	6,895.6	26.2	13.6	164.55	338.2	-98.1	1,149.4	1,122.5	26.94	42.664	
7,100.0	6,965.2	7,002.9	6,989.8	26.6	13.7	165.67	320.9	-100.5	1,167.4	1,140.5	26.93	43.350	
7,167.0	7,030.7	7,063.2	7,047.5	26.8	13.6	166.67	303.7	-102.1	1,179.8	1,153.0	26.84	43.955	
7,200.0	7,063.0	7,091.7	7,074.3	27.0	13.6	-179.90	293.9	-102.8	1,186.1	1,159.5	26.70	44.433	
7,250.0	7,111.9	7,134.3	7,113.5	27.2	13.6	-159.57	277.2	-103.8	1,195.9	1,169.4	26.48	45.160	
7,300.0	7,160.6	7,176.2	7,151.0	27.3	13.5	-142.32	258.6	-104.9	1,205.8	1,179.5	26.30	45.854	
7,350.0	7,208.9	7,217.3	7,186.7	27.5	13.5	-129.20	238.2	-105.9	1,215.8	1,189.7	26.15	46.487	
7,400.0	7,256.5	7,257.9	7,220.7	27.6	13.4	-119.48	216.1	-106.9	1,225.8	1,199.8	26.06	47.038	
7,450.0	7,303.1	7,300.0	7,254.6	27.8	13.4	-112.14	191.2	-107.9	1,235.8	1,209.7	26.02	47.496	
7,500.0	7,348.7	7,337.4	7,283.5	27.9	13.4	-106.49	167.4	-108.7	1,245.6	1,219.5	26.04	47.832	
7,550.0	7,392.8	7,376.5	7,312.3	28.0	13.3	-101.95	141.0	-109.6	1,255.1	1,229.0	26.11	48.064	
7,600.0	7,435.4	7,415.2	7,339.3	28.1	13.3	-98.23	113.3	-110.5	1,264.4	1,238.2	26.24	48.195	
7,650.0	7,476.2	7,450.0	7,362.3	28.2	13.3	-95.16	87.3	-111.2	1,273.4	1,247.0	26.39	48.247	
7,700.0	7,515.1	7,491.6	7,388.1	28.3	13.4	-92.48	54.6	-112.0	1,282.0	1,255.4	26.61	48.185	
7,750.0	7,551.7	7,529.4	7,409.9	28.4	13.4	-90.22	23.8	-112.8	1,290.1	1,263.3	26.85	48.057	
7,800.0	7,586.0	7,566.9	7,429.9	28.5	13.5	-88.27	-8.0	-113.5	1,297.7	1,270.6	27.10	47.889	
7,850.0	7,617.8	7,600.0	7,446.1	28.6	13.6	-86.61	-36.8	-114.1	1,304.8	1,277.4	27.36	47.690	
7,900.0	7,646.9	7,641.3	7,464.4	28.7	13.7	-85.12	-73.8	-114.8	1,311.2	1,283.6	27.67	47.381	
7,950.0	7,673.1	7,678.2	7,479.0	28.8	13.9	-83.87	-107.7	-115.4	1,317.1	1,289.1	27.99	47.059	
8,000.0	7,696.5	7,715.0	7,491.7	29.0	14.1	-82.81	-142.2	-115.9	1,322.2	1,293.9	28.31	46.703	
8,050.0	7,716.7	7,750.0	7,502.2	29.1	14.2	-81.92	-175.6	-116.4	1,326.7	1,298.0	28.63	46.331	
8,100.0	7,733.9	7,788.2	7,511.8	29.3	14.5	-81.18	-212.6	-116.9	1,330.4	1,301.4	29.00	45.872	
8,150.0	7,747.7	7,824.7	7,519.0	29.4	14.7	-80.60	-248.3	-117.3	1,333.4	1,304.0	29.37	45.392	
8,200.0	7,758.3	7,861.1	7,524.5	29.6	15.0	-80.17	-284.3	-117.7	1,335.6	1,305.8	29.76	44.874	
8,250.0	7,765.5	7,900.0	7,528.2	29.8	15.3	-79.88	-323.0	-118.1	1,337.0	1,306.8	30.19	44.282	
8,300.0	7,769.3	7,933.7	7,529.8	30.0	15.6	-79.73	-356.7	-118.3	1,337.6	1,307.0	30.61	43.698	
8,330.9	7,770.0	7,958.4	7,530.0	30.2	15.8	-79.71	-381.4	-118.5	1,337.6	1,306.7	30.91	43.271	
8,400.0	7,770.0	8,027.5	7,530.0	30.5	16.5	-79.70	-450.5	-119.0	1,337.1	1,304.9	32.26	41.449	
8,500.0	7,770.0	8,127.5	7,530.0	31.1	17.6	-79.70	-550.5	-119.7	1,336.4	1,302.0	34.39	38.856	
8,600.0	7,770.0	8,227.5	7,530.0	31.8	18.8	-79.69	-650.5	-120.4	1,335.7	1,299.0	36.73	36.367	
8,700.0	7,770.0	8,327.5	7,530.0	32.5	20.0	-79.69	-750.5	-121.1	1,335.1	1,295.8	39.23	34.031	
8,800.0	7,770.0	8,427.5	7,530.0	33.3	21.4	-79.68	-850.5	-121.8	1,334.4	1,292.5	41.87	31.872	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,900.0	7,770.0	8,527.5	7,530.0	34.2	22.8	-79.68	-950.5	-122.5	1,333.7	1,289.1	44.61	29.893	
9,000.0	7,770.0	8,627.5	7,530.0	35.2	24.2	-79.67	-1,050.5	-123.2	1,333.0	1,285.5	47.45	28.090	
9,100.0	7,770.0	8,727.5	7,530.0	36.2	25.7	-79.67	-1,150.5	-123.9	1,332.3	1,281.9	50.37	26.450	
9,200.0	7,770.0	8,827.5	7,530.0	37.3	27.2	-79.66	-1,250.4	-124.6	1,331.6	1,278.3	53.35	24.960	
9,300.0	7,770.0	8,927.5	7,530.0	38.4	28.7	-79.65	-1,350.4	-125.3	1,330.9	1,274.6	56.38	23.605	
9,400.0	7,770.0	9,027.5	7,530.0	39.6	30.3	-79.65	-1,450.4	-126.0	1,330.3	1,270.8	59.46	22.371	
9,500.0	7,770.0	9,127.5	7,530.0	40.8	31.9	-79.64	-1,550.4	-126.7	1,329.6	1,267.0	62.58	21.245	
9,600.0	7,770.0	9,227.5	7,530.0	42.0	33.5	-79.64	-1,650.4	-127.4	1,328.9	1,263.1	65.73	20.217	
9,700.0	7,770.0	9,327.5	7,530.0	43.3	35.1	-79.63	-1,750.4	-128.1	1,328.2	1,259.3	68.91	19.274	
9,800.0	7,770.0	9,427.5	7,530.0	44.6	36.7	-79.63	-1,850.4	-128.8	1,327.5	1,255.4	72.12	18.408	
9,900.0	7,770.0	9,527.5	7,530.0	46.0	38.4	-79.62	-1,950.4	-129.5	1,326.8	1,251.5	75.34	17.610	
10,000.0	7,770.0	9,627.5	7,530.0	47.4	40.0	-79.62	-2,050.4	-130.2	1,326.1	1,247.5	78.59	16.875	
10,100.0	7,770.0	9,727.5	7,530.0	48.7	41.7	-79.61	-2,150.4	-130.9	1,325.4	1,243.6	81.85	16.194	
10,200.0	7,770.0	9,827.5	7,530.0	50.2	43.3	-79.61	-2,250.4	-131.6	1,324.8	1,239.6	85.13	15.562	
10,300.0	7,770.0	9,927.4	7,530.0	51.6	45.0	-79.60	-2,350.4	-132.3	1,324.1	1,235.7	88.42	14.976	
10,400.0	7,770.0	10,027.4	7,530.0	53.1	46.7	-79.60	-2,450.4	-133.0	1,323.4	1,231.7	91.72	14.429	
10,500.0	7,770.0	10,127.4	7,530.0	54.6	48.4	-79.59	-2,550.4	-133.7	1,322.7	1,227.7	95.03	13.919	
10,600.0	7,770.0	10,227.4	7,530.0	56.1	50.1	-79.58	-2,650.4	-134.4	1,322.0	1,223.7	98.35	13.442	
10,700.0	7,770.0	10,327.4	7,530.0	57.6	51.7	-79.58	-2,750.4	-135.1	1,321.3	1,219.6	101.68	12.995	
10,800.0	7,770.0	10,427.4	7,530.0	59.1	53.4	-79.57	-2,850.4	-135.8	1,320.6	1,215.6	105.02	12.576	
10,900.0	7,770.0	10,527.4	7,530.0	60.6	55.1	-79.57	-2,950.4	-136.5	1,320.0	1,211.6	108.36	12.181	
11,000.0	7,770.0	10,627.4	7,530.0	62.2	56.8	-79.56	-3,050.4	-137.2	1,319.3	1,207.6	111.71	11.810	
11,100.0	7,770.0	10,727.4	7,530.0	63.7	58.5	-79.56	-3,150.4	-137.9	1,318.6	1,203.5	115.07	11.459	
11,200.0	7,770.0	10,827.4	7,530.0	65.3	60.3	-79.55	-3,250.3	-138.5	1,317.9	1,199.5	118.43	11.128	
11,300.0	7,770.0	10,927.4	7,530.0	66.9	62.0	-79.55	-3,350.3	-139.2	1,317.2	1,195.4	121.79	10.815	
11,400.0	7,770.0	11,027.4	7,530.0	68.5	63.7	-79.54	-3,450.3	-139.9	1,316.5	1,191.4	125.16	10.518	
11,500.0	7,770.0	11,127.4	7,530.0	70.1	65.4	-79.53	-3,550.3	-140.6	1,315.8	1,187.3	128.54	10.237	
11,600.0	7,770.0	11,227.4	7,530.0	71.7	67.1	-79.53	-3,650.3	-141.3	1,315.2	1,183.2	131.92	9.970	
11,700.0	7,770.0	11,327.4	7,530.0	73.3	68.8	-79.52	-3,750.3	-142.0	1,314.5	1,179.2	135.30	9.715	
11,800.0	7,770.0	11,427.4	7,530.0	74.9	70.6	-79.52	-3,850.3	-142.7	1,313.8	1,175.1	138.68	9.473	
11,900.0	7,770.0	11,527.4	7,530.0	76.5	72.3	-79.51	-3,950.3	-143.4	1,313.1	1,171.0	142.07	9.243	
12,000.0	7,770.0	11,627.4	7,530.0	78.1	74.0	-79.51	-4,050.3	-144.1	1,312.4	1,166.9	145.46	9.022	
12,100.0	7,770.0	11,727.4	7,530.0	79.8	75.7	-79.50	-4,150.3	-144.8	1,311.7	1,162.9	148.85	8.812	
12,200.0	7,770.0	11,827.4	7,530.0	81.4	77.5	-79.50	-4,250.3	-145.5	1,311.0	1,158.8	152.25	8.611	
12,300.0	7,770.0	11,927.4	7,530.0	83.0	79.2	-79.49	-4,350.3	-146.2	1,310.3	1,154.7	155.64	8.419	
12,400.0	7,770.0	12,027.4	7,530.0	84.7	80.9	-79.48	-4,450.3	-146.9	1,309.7	1,150.6	159.04	8.235	
12,500.0	7,770.0	12,127.4	7,530.0	86.3	82.6	-79.48	-4,550.3	-147.6	1,309.0	1,146.5	162.45	8.058	
12,600.0	7,770.0	12,227.4	7,530.0	88.0	84.4	-79.47	-4,650.3	-148.3	1,308.3	1,142.4	165.85	7.888	
12,700.0	7,770.0	12,327.4	7,530.0	89.7	86.1	-79.47	-4,750.3	-149.0	1,307.6	1,138.3	169.25	7.726	
12,800.0	7,770.0	12,427.4	7,530.0	91.3	87.8	-79.46	-4,850.3	-149.7	1,306.9	1,134.3	172.66	7.569	
12,900.0	7,770.0	12,527.4	7,530.0	93.0	89.6	-79.46	-4,950.3	-150.4	1,306.2	1,130.2	176.07	7.419	
13,000.0	7,770.0	12,627.4	7,530.0	94.7	91.3	-79.45	-5,050.3	-151.1	1,305.5	1,126.1	179.48	7.274	
13,100.0	7,770.0	12,727.4	7,530.0	96.3	93.0	-79.45	-5,150.3	-151.8	1,304.9	1,122.0	182.89	7.135	
13,200.0	7,770.0	12,827.4	7,530.0	98.0	94.8	-79.44	-5,250.3	-152.5	1,304.2	1,117.9	186.30	7.000	
13,300.0	7,770.0	12,927.4	7,530.0	99.7	96.5	-79.43	-5,350.2	-153.2	1,303.5	1,113.8	189.71	6.871	
13,400.0	7,770.0	13,027.4	7,530.0	101.4	98.3	-79.43	-5,450.2	-153.9	1,302.8	1,109.7	193.12	6.746	
13,500.0	7,770.0	13,127.4	7,530.0	103.1	100.0	-79.42	-5,550.2	-154.6	1,302.1	1,105.6	196.54	6.625	
13,600.0	7,770.0	13,227.4	7,530.0	104.7	101.7	-79.42	-5,650.2	-155.3	1,301.4	1,101.5	199.95	6.509	
13,700.0	7,770.0	13,327.4	7,530.0	106.4	103.5	-79.41	-5,750.2	-156.0	1,300.7	1,097.4	203.37	6.396	
13,800.0	7,770.0	13,427.4	7,530.0	108.1	105.2	-79.41	-5,850.2	-156.7	1,300.1	1,093.3	206.79	6.287	
13,900.0	7,770.0	13,527.4	7,530.0	109.8	106.9	-79.40	-5,950.2	-157.4	1,299.4	1,089.2	210.21	6.181	
14,000.0	7,770.0	13,627.4	7,530.0	111.5	108.7	-79.40	-6,050.2	-158.1	1,298.7	1,085.1	213.62	6.079	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,100.0	7,770.0	13,727.4	7,530.0	113.2	110.4	-79.39	-6,150.2	-158.8	1,298.0	1,081.0	217.04	5.980	
14,200.0	7,770.0	13,827.4	7,530.0	114.9	112.2	-79.38	-6,250.2	-159.5	1,297.3	1,076.8	220.46	5.884	
14,300.0	7,770.0	13,927.4	7,530.0	116.6	113.9	-79.38	-6,350.2	-160.2	1,296.6	1,072.7	223.89	5.791	
14,400.0	7,770.0	14,027.3	7,530.0	118.3	115.7	-79.37	-6,450.2	-160.9	1,295.9	1,068.6	227.31	5.701	
14,500.0	7,770.0	14,127.3	7,530.0	120.0	117.4	-79.37	-6,550.2	-161.6	1,295.3	1,064.5	230.73	5.614	
14,600.0	7,770.0	14,227.3	7,530.0	121.7	119.1	-79.36	-6,650.2	-162.3	1,294.6	1,060.4	234.15	5.529	
14,700.0	7,770.0	14,327.3	7,530.0	123.4	120.9	-79.36	-6,750.2	-163.0	1,293.9	1,056.3	237.57	5.446	
14,800.0	7,770.0	14,427.3	7,530.0	125.1	122.6	-79.35	-6,850.2	-163.7	1,293.2	1,052.2	241.00	5.366	
14,900.0	7,770.0	14,527.3	7,530.0	126.8	124.4	-79.34	-6,950.2	-164.4	1,292.5	1,048.1	244.42	5.288	
15,000.0	7,770.0	14,627.3	7,530.0	128.5	126.1	-79.34	-7,050.2	-165.1	1,291.8	1,044.0	247.85	5.212	
15,100.0	7,770.0	14,727.3	7,530.0	130.2	127.9	-79.33	-7,150.2	-165.8	1,291.1	1,039.9	251.27	5.138	
15,200.0	7,770.0	14,827.3	7,530.0	132.0	129.6	-79.33	-7,250.2	-166.5	1,290.5	1,035.8	254.70	5.067	
15,300.0	7,770.0	14,927.3	7,530.0	133.7	131.3	-79.32	-7,350.1	-167.2	1,289.8	1,031.6	258.12	4.997	
15,400.0	7,770.0	15,027.3	7,530.0	135.4	133.1	-79.32	-7,450.1	-167.9	1,289.1	1,027.5	261.55	4.929	
15,500.0	7,770.0	15,127.3	7,530.0	137.1	134.8	-79.31	-7,550.1	-168.6	1,288.4	1,023.4	264.97	4.862	
15,600.0	7,770.0	15,227.3	7,530.0	138.8	136.6	-79.30	-7,650.1	-169.3	1,287.7	1,019.3	268.40	4.798	
15,700.0	7,770.0	15,327.3	7,530.0	140.5	138.3	-79.30	-7,750.1	-170.0	1,287.0	1,015.2	271.83	4.735	
15,800.0	7,770.0	15,427.3	7,530.0	142.2	140.1	-79.29	-7,850.1	-170.7	1,286.3	1,011.1	275.25	4.673	
15,900.0	7,770.0	15,527.3	7,530.0	144.0	141.8	-79.29	-7,950.1	-171.4	1,285.7	1,007.0	278.68	4.613	
16,000.0	7,770.0	15,627.3	7,530.0	145.7	143.6	-79.28	-8,050.1	-172.0	1,285.0	1,002.9	282.11	4.555	
16,100.0	7,770.0	15,727.3	7,530.0	147.4	145.3	-79.27	-8,150.1	-172.7	1,284.3	998.7	285.54	4.498	
16,200.0	7,770.0	15,827.3	7,530.0	149.1	147.1	-79.27	-8,250.1	-173.4	1,283.6	994.6	288.96	4.442	
16,300.0	7,770.0	15,927.3	7,530.0	150.8	148.8	-79.26	-8,350.1	-174.1	1,282.9	990.5	292.39	4.388	
16,400.0	7,770.0	16,027.3	7,530.0	152.6	150.6	-79.26	-8,450.1	-174.8	1,282.2	986.4	295.82	4.334	
16,500.0	7,770.0	16,127.3	7,530.0	154.3	152.3	-79.25	-8,550.1	-175.5	1,281.5	982.3	299.25	4.283	
16,600.0	7,770.0	16,227.3	7,530.0	156.0	154.0	-79.25	-8,650.1	-176.2	1,280.9	978.2	302.68	4.232	
16,700.0	7,770.0	16,327.3	7,530.0	157.7	155.8	-79.24	-8,750.1	-176.9	1,280.2	974.1	306.11	4.182	
16,800.0	7,770.0	16,427.3	7,530.0	159.5	157.5	-79.23	-8,850.1	-177.6	1,279.5	969.9	309.53	4.134	
16,900.0	7,770.0	16,527.3	7,530.0	161.2	159.3	-79.23	-8,950.1	-178.3	1,278.8	965.8	312.96	4.086	
17,000.0	7,770.0	16,627.3	7,530.0	162.9	161.0	-79.22	-9,050.1	-179.0	1,278.1	961.7	316.39	4.040	
17,100.0	7,770.0	16,727.3	7,530.0	164.6	162.8	-79.22	-9,150.1	-179.7	1,277.4	957.6	319.82	3.994	
17,200.0	7,770.0	16,827.3	7,530.0	166.4	164.5	-79.21	-9,250.1	-180.4	1,276.7	953.5	323.25	3.950	
17,300.0	7,770.0	16,927.3	7,530.0	168.1	166.3	-79.20	-9,350.1	-181.1	1,276.1	949.4	326.68	3.906	
17,400.0	7,770.0	17,027.3	7,530.0	169.8	168.0	-79.20	-9,450.0	-181.8	1,275.4	945.3	330.11	3.863	
17,500.0	7,770.0	17,127.3	7,530.0	171.6	169.8	-79.19	-9,550.0	-182.5	1,274.7	941.1	333.54	3.822	
17,600.0	7,770.0	17,227.3	7,530.0	173.3	171.5	-79.19	-9,650.0	-183.2	1,274.0	937.0	336.97	3.781	
17,700.0	7,770.0	17,327.3	7,530.0	175.0	173.3	-79.18	-9,750.0	-183.9	1,273.3	932.9	340.40	3.741	
17,775.9	7,770.0	17,403.2	7,530.0	176.3	174.6	-79.18	-9,825.9	-184.4	1,272.8	929.8	343.00	3.711	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.35	-0.4	59.9	59.9				
100.0	100.0	99.0	99.0	0.2	0.2	90.35	-0.4	59.9	59.9	59.6	0.30	198.203	
200.0	200.0	199.0	199.0	0.3	0.3	90.35	-0.4	59.9	59.9	59.2	0.65	91.997	
250.0	250.0	249.0	249.0	0.4	0.4	90.35	-0.4	59.9	59.9	59.1	0.83	72.547	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	165.41	-0.4	59.9	60.1	59.1	1.00	60.099	
400.0	400.0	399.0	399.0	0.7	0.7	165.82	-0.4	59.9	61.8	60.4	1.35	45.807	
500.0	499.9	498.9	498.9	0.9	0.8	166.56	-0.4	59.9	65.2	63.5	1.70	38.392	
600.0	599.8	598.8	598.8	1.1	1.0	167.37	-0.2	59.9	70.3	68.2	2.05	34.341	
700.0	699.5	698.6	698.6	1.3	1.2	167.21	1.6	59.9	77.0	74.6	2.40	32.149	
800.0	799.2	798.3	798.2	1.5	1.4	166.17	5.0	60.0	85.5	82.7	2.75	31.073	
900.0	898.6	897.7	897.5	1.7	1.6	164.59	10.1	60.0	95.6	92.5	3.11	30.727	
1,000.0	997.9	997.0	996.6	2.0	1.7	163.40	15.5	60.1	107.5	104.0	3.48	30.907	
1,100.0	1,096.9	1,096.0	1,095.5	2.3	1.9	162.67	20.8	60.2	121.1	117.2	3.85	31.459	
1,200.0	1,195.7	1,194.9	1,194.2	2.6	2.1	162.31	26.2	60.3	136.3	132.1	4.22	32.285	
1,300.0	1,294.1	1,293.4	1,292.6	2.9	2.3	162.21	31.5	60.4	153.2	148.6	4.60	33.320	
1,400.0	1,392.3	1,391.7	1,390.8	3.3	2.5	162.29	36.9	60.4	171.7	166.7	4.97	34.519	
1,462.7	1,453.7	1,453.1	1,452.1	3.5	2.6	162.41	40.2	60.5	184.1	178.9	5.21	35.342	
1,500.0	1,490.1	1,489.7	1,488.6	3.7	2.7	162.52	42.2	60.5	191.7	186.4	5.35	35.813	
1,600.0	1,587.9	1,587.6	1,586.4	4.0	2.9	162.76	47.5	60.6	212.1	206.3	5.74	36.955	
1,700.0	1,685.7	1,685.5	1,684.1	4.4	3.1	162.96	52.8	60.7	232.4	226.3	6.13	37.948	
1,800.0	1,783.4	1,783.4	1,781.9	4.8	3.3	163.12	58.1	60.7	252.8	246.3	6.51	38.820	
1,900.0	1,881.2	1,881.3	1,879.6	5.2	3.5	163.27	63.4	60.8	273.2	266.3	6.90	39.591	
2,000.0	1,979.0	1,979.2	1,977.4	5.6	3.7	163.39	68.7	60.9	293.5	286.2	7.29	40.278	
2,100.0	2,076.7	2,077.1	2,075.1	6.0	3.8	163.49	74.1	61.0	313.9	306.2	7.68	40.893	
2,200.0	2,174.5	2,175.0	2,172.9	6.4	4.0	163.59	79.4	61.1	334.2	326.2	8.06	41.448	
2,300.0	2,272.3	2,272.9	2,270.7	6.8	4.2	163.67	84.7	61.1	354.6	346.2	8.45	41.950	
2,400.0	2,370.0	2,370.8	2,368.4	7.3	4.4	163.74	90.0	61.2	375.0	366.1	8.84	42.407	
2,500.0	2,467.8	2,468.7	2,466.2	7.7	4.6	163.81	95.3	61.3	395.3	386.1	9.23	42.824	
2,600.0	2,565.6	2,566.6	2,563.9	8.1	4.8	163.87	100.6	61.4	415.7	406.1	9.62	43.207	
2,700.0	2,663.4	2,664.5	2,661.7	8.5	5.0	163.92	105.9	61.4	436.1	426.1	10.01	43.560	
2,800.0	2,761.1	2,762.4	2,759.5	8.9	5.2	163.97	111.2	61.5	456.4	446.0	10.40	43.885	
2,900.0	2,858.9	2,860.3	2,857.2	9.3	5.4	164.02	116.6	61.6	476.8	466.0	10.79	44.186	
3,000.0	2,956.7	2,958.2	2,955.0	9.7	5.6	164.06	121.9	61.7	497.2	486.0	11.18	44.466	
3,100.0	3,054.4	3,056.1	3,052.7	10.1	5.8	164.10	127.2	61.7	517.5	506.0	11.57	44.727	
3,200.0	3,152.2	3,154.0	3,150.5	10.5	6.0	164.13	132.5	61.8	537.9	526.0	11.96	44.970	
3,300.0	3,250.0	3,251.9	3,248.3	10.9	6.2	164.17	137.8	61.9	558.3	545.9	12.35	45.198	
3,400.0	3,347.7	3,349.8	3,346.0	11.3	6.4	164.20	143.1	62.0	578.7	565.9	12.74	45.411	
3,500.0	3,445.5	3,447.7	3,443.8	11.7	6.5	164.23	148.4	62.1	599.0	585.9	13.13	45.612	
3,600.0	3,543.3	3,545.6	3,541.5	12.2	6.7	164.25	153.7	62.1	619.4	605.9	13.52	45.800	
3,700.0	3,641.0	3,643.5	3,639.3	12.6	6.9	164.28	159.1	62.2	639.8	625.8	13.91	45.978	
3,800.0	3,738.8	3,741.4	3,737.0	13.0	7.1	164.30	164.4	62.3	660.1	645.8	14.31	46.146	
3,900.0	3,836.6	3,839.3	3,834.8	13.4	7.3	164.32	169.7	62.4	680.5	665.8	14.70	46.305	
4,000.0	3,934.3	3,937.3	3,932.6	13.8	7.5	164.34	175.0	62.4	700.9	685.8	15.09	46.456	
4,100.0	4,032.1	4,035.2	4,030.3	14.2	7.7	164.36	180.3	62.5	721.2	705.8	15.48	46.599	
4,200.0	4,129.9	4,133.1	4,128.1	14.6	7.9	164.38	185.6	62.6	741.6	725.7	15.87	46.735	
4,300.0	4,227.7	4,231.0	4,225.8	15.0	8.1	164.40	190.9	62.7	762.0	745.7	16.26	46.864	
4,400.0	4,325.4	4,328.9	4,323.6	15.4	8.3	164.41	196.2	62.8	782.4	765.7	16.65	46.987	
4,500.0	4,423.2	4,426.8	4,421.4	15.9	8.5	164.43	201.6	62.8	802.7	785.7	17.04	47.104	
4,600.0	4,521.0	4,524.7	4,519.1	16.3	8.7	164.44	206.9	62.9	823.1	805.7	17.43	47.216	
4,700.0	4,618.7	4,622.6	4,616.9	16.7	8.9	164.46	212.2	63.0	843.5	825.6	17.82	47.323	
4,800.0	4,716.5	4,720.5	4,714.6	17.1	9.1	164.47	217.5	63.1	863.8	845.6	18.21	47.425	
4,900.0	4,814.3	4,818.4	4,812.4	17.5	9.3	164.49	222.8	63.1	884.2	865.6	18.61	47.523	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,912.0	4,916.3	4,910.2	17.9	9.5	164.50	228.1	63.2	904.6	885.6	19.00	47.616	
5,100.0	5,009.8	5,014.2	5,007.9	18.3	9.7	164.51	233.4	63.3	924.9	905.6	19.39	47.706	
5,200.0	5,107.6	5,112.1	5,105.7	18.7	9.8	164.52	238.7	63.4	945.3	925.5	19.78	47.793	
5,300.0	5,205.3	5,210.0	5,203.4	19.2	10.0	164.53	244.1	63.5	965.7	945.5	20.17	47.876	
5,400.0	5,303.1	5,307.9	5,301.2	19.6	10.2	164.54	249.4	63.5	986.1	965.5	20.56	47.956	
5,500.0	5,400.9	5,405.8	5,398.9	20.0	10.4	164.55	254.7	63.6	1,006.4	985.5	20.95	48.032	
5,600.0	5,498.6	5,503.7	5,496.7	20.4	10.6	164.56	260.0	63.7	1,026.8	1,005.5	21.34	48.106	
5,700.0	5,596.4	5,601.6	5,594.5	20.8	10.8	164.57	265.3	63.8	1,047.2	1,025.4	21.74	48.177	
5,800.0	5,694.2	5,699.5	5,692.2	21.2	11.0	164.58	270.6	63.8	1,067.5	1,045.4	22.13	48.246	
5,900.0	5,791.9	5,797.4	5,790.0	21.6	11.2	164.59	275.9	63.9	1,087.9	1,065.4	22.52	48.312	
6,000.0	5,889.7	5,895.3	5,887.7	22.0	11.4	164.60	281.2	64.0	1,108.3	1,085.4	22.91	48.376	
6,100.0	5,987.5	5,993.2	5,985.5	22.4	11.6	164.60	286.5	64.1	1,128.6	1,105.3	23.30	48.438	
6,200.0	6,085.3	6,091.1	6,083.3	22.9	11.8	164.61	291.9	64.2	1,149.0	1,125.3	23.69	48.498	
6,300.0	6,183.0	6,189.0	6,181.0	23.3	12.0	164.62	297.2	64.2	1,169.4	1,145.3	24.08	48.556	
6,400.0	6,280.8	6,286.9	6,278.8	23.7	12.2	164.63	302.5	64.3	1,189.8	1,165.3	24.47	48.612	
6,500.0	6,378.6	6,384.8	6,376.5	24.1	12.4	164.63	307.8	64.4	1,210.1	1,185.3	24.87	48.666	
6,600.0	6,476.3	6,482.7	6,474.3	24.5	12.6	164.64	313.1	64.5	1,230.5	1,205.2	25.26	48.718	
6,700.0	6,574.1	6,580.6	6,572.1	24.9	12.8	164.65	318.4	64.5	1,250.9	1,225.2	25.65	48.769	
6,800.0	6,671.9	6,678.5	6,669.8	25.3	13.0	164.65	323.7	64.6	1,271.2	1,245.2	26.04	48.818	
6,900.0	6,769.6	6,776.4	6,767.6	25.7	13.1	164.66	329.0	64.7	1,291.6	1,265.2	26.43	48.866	
7,000.0	6,867.4	6,874.3	6,865.3	26.2	13.3	164.66	334.4	64.8	1,312.0	1,285.2	26.82	48.912	
7,100.0	6,965.2	6,972.2	6,963.1	26.6	13.5	164.67	339.7	64.8	1,332.4	1,305.1	27.21	48.957	
7,167.0	7,030.7	7,037.8	7,028.6	26.8	13.7	164.68	343.1	64.9	1,346.0	1,318.5	27.47	48.995	
7,200.0	7,063.0	7,070.1	7,060.9	27.0	13.7	177.65	343.5	64.9	1,352.7	1,325.3	27.47	49.247	
7,250.0	7,111.9	7,119.0	7,109.7	27.2	13.8	-162.70	341.4	65.0	1,362.9	1,335.5	27.43	49.689	
7,300.0	7,160.6	7,167.9	7,158.2	27.3	13.8	-146.10	335.9	65.0	1,373.1	1,345.7	27.36	50.183	
7,350.0	7,208.9	7,216.7	7,206.3	27.5	13.8	-133.60	327.1	65.0	1,383.1	1,355.9	27.27	50.711	
7,400.0	7,256.5	7,265.5	7,253.6	27.6	13.8	-124.48	315.1	65.1	1,393.1	1,365.9	27.18	51.256	
7,450.0	7,303.1	7,314.4	7,300.0	27.8	13.7	-117.73	299.9	65.1	1,402.8	1,375.7	27.08	51.798	
7,500.0	7,348.7	7,363.2	7,345.3	27.9	13.7	-112.59	281.6	65.2	1,412.3	1,385.3	26.99	52.319	
7,550.0	7,392.8	7,412.2	7,389.2	28.0	13.6	-108.56	260.1	65.2	1,421.5	1,394.5	26.92	52.801	
7,600.0	7,435.4	7,461.2	7,431.7	28.1	13.6	-105.31	235.7	65.2	1,430.3	1,403.5	26.87	53.225	
7,650.0	7,476.2	7,510.2	7,472.5	28.2	13.5	-102.64	208.4	65.3	1,438.8	1,412.0	26.86	53.576	
7,700.0	7,515.1	7,559.4	7,511.4	28.3	13.5	-100.41	178.3	65.3	1,446.9	1,420.1	26.88	53.838	
7,750.0	7,551.7	7,608.7	7,548.1	28.4	13.5	-98.52	145.6	65.3	1,454.6	1,427.6	26.94	53.997	
7,800.0	7,586.0	7,658.0	7,582.7	28.5	13.4	-96.92	110.3	65.3	1,461.7	1,434.7	27.05	54.043	
7,850.0	7,617.8	7,707.5	7,614.7	28.6	13.5	-95.54	72.7	65.4	1,468.3	1,441.1	27.21	53.967	
7,900.0	7,646.9	7,757.0	7,644.2	28.7	13.5	-94.36	32.8	65.4	1,474.4	1,447.0	27.42	53.761	
7,950.0	7,673.1	7,806.7	7,670.9	28.8	13.6	-93.35	-9.1	65.4	1,479.9	1,452.2	27.70	53.424	
8,000.0	7,696.5	7,856.5	7,694.6	29.0	13.8	-92.50	-52.8	65.4	1,484.7	1,456.7	28.04	52.955	
8,050.0	7,716.7	7,906.3	7,715.3	29.1	13.9	-91.79	-98.1	65.4	1,489.0	1,460.5	28.44	52.357	
8,100.0	7,733.9	7,956.3	7,732.8	29.3	14.2	-91.21	-144.9	65.5	1,492.5	1,463.6	28.90	51.638	
8,150.0	7,747.7	8,006.3	7,747.1	29.4	14.5	-90.75	-192.8	65.5	1,495.4	1,466.0	29.43	50.809	
8,200.0	7,758.3	8,056.4	7,757.9	29.6	14.8	-90.41	-241.7	65.5	1,497.6	1,467.6	30.02	49.884	
8,250.0	7,765.5	8,106.5	7,765.4	29.8	15.2	-90.18	-291.2	65.5	1,499.1	1,468.4	30.67	48.876	
8,300.0	7,769.3	8,156.6	7,769.3	30.0	15.6	-90.06	-341.2	65.5	1,499.9	1,468.5	31.38	47.805	
8,330.9	7,770.0	8,187.6	7,770.0	30.2	15.8	-90.04	-372.2	65.5	1,500.1	1,468.2	31.84	47.118	
8,400.0	7,770.0	8,256.7	7,770.0	30.5	16.5	-90.04	-441.3	65.5	1,500.1	1,466.9	33.18	45.211	
8,500.0	7,770.0	8,356.7	7,770.0	31.1	17.6	-90.04	-541.3	65.5	1,500.1	1,464.7	35.31	42.488	
8,600.0	7,770.0	8,456.7	7,770.0	31.8	18.8	-90.04	-641.3	65.5	1,500.1	1,462.4	37.64	39.854	
8,700.0	7,770.0	8,556.7	7,770.0	32.5	20.0	-90.04	-741.3	65.5	1,500.1	1,459.9	40.14	37.367	
8,800.0	7,770.0	8,656.7	7,770.0	33.3	21.3	-90.04	-841.3	65.5	1,500.1	1,457.3	42.79	35.056	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,900.0	7,770.0	8,756.7	7,770.0	34.2	22.7	-90.04	-941.3	65.5	1,500.1	1,454.5	45.55	32.929	
9,000.0	7,770.0	8,856.7	7,770.0	35.2	24.2	-90.04	-1,041.3	65.5	1,500.1	1,451.6	48.41	30.984	
9,100.0	7,770.0	8,956.7	7,770.0	36.2	25.6	-90.04	-1,141.3	65.5	1,500.1	1,448.7	51.35	29.210	
9,200.0	7,770.0	9,056.7	7,770.0	37.3	27.1	-90.04	-1,241.3	65.5	1,500.1	1,445.7	54.36	27.594	
9,300.0	7,770.0	9,156.7	7,770.0	38.4	28.7	-90.04	-1,341.3	65.5	1,500.1	1,442.6	57.43	26.121	
9,400.0	7,770.0	9,256.7	7,770.0	39.6	30.2	-90.04	-1,441.3	65.5	1,500.1	1,439.5	60.54	24.778	
9,500.0	7,770.0	9,356.7	7,770.0	40.8	31.8	-90.04	-1,541.3	65.5	1,500.1	1,436.4	63.69	23.551	
9,600.0	7,770.0	9,456.7	7,770.0	42.0	33.4	-90.04	-1,641.3	65.5	1,500.1	1,433.2	66.88	22.428	
9,700.0	7,770.0	9,556.7	7,770.0	43.3	35.0	-90.04	-1,741.3	65.5	1,500.1	1,430.0	70.10	21.398	
9,800.0	7,770.0	9,656.7	7,770.0	44.6	36.6	-90.04	-1,841.3	65.5	1,500.1	1,426.7	73.35	20.451	
9,900.0	7,770.0	9,756.7	7,770.0	46.0	38.3	-90.04	-1,941.3	65.5	1,500.1	1,423.4	76.62	19.578	
10,000.0	7,770.0	9,856.7	7,770.0	47.4	39.9	-90.04	-2,041.3	65.5	1,500.1	1,420.1	79.91	18.772	
10,100.0	7,770.0	9,956.7	7,770.0	48.7	41.6	-90.04	-2,141.3	65.5	1,500.1	1,416.8	83.21	18.026	
10,200.0	7,770.0	10,056.7	7,770.0	50.2	43.2	-90.04	-2,241.3	65.5	1,500.1	1,413.5	86.54	17.334	
10,300.0	7,770.0	10,156.7	7,770.0	51.6	44.9	-90.04	-2,341.3	65.5	1,500.1	1,410.2	89.88	16.690	
10,400.0	7,770.0	10,256.7	7,770.0	53.1	46.6	-90.04	-2,441.3	65.5	1,500.1	1,406.8	93.23	16.091	
10,500.0	7,770.0	10,356.7	7,770.0	54.6	48.3	-90.04	-2,541.3	65.5	1,500.1	1,403.5	96.59	15.531	
10,600.0	7,770.0	10,456.7	7,770.0	56.1	49.9	-90.04	-2,641.3	65.5	1,500.1	1,400.1	99.96	15.007	
10,700.0	7,770.0	10,556.7	7,770.0	57.6	51.6	-90.04	-2,741.3	65.5	1,500.1	1,396.7	103.34	14.516	
10,800.0	7,770.0	10,656.7	7,770.0	59.1	53.3	-90.04	-2,841.3	65.5	1,500.1	1,393.3	106.73	14.055	
10,900.0	7,770.0	10,756.7	7,770.0	60.6	55.0	-90.04	-2,941.3	65.5	1,500.1	1,389.9	110.12	13.622	
11,000.0	7,770.0	10,856.7	7,770.0	62.2	56.7	-90.04	-3,041.3	65.5	1,500.1	1,386.5	113.53	13.213	
11,100.0	7,770.0	10,956.7	7,770.0	63.7	58.4	-90.04	-3,141.3	65.5	1,500.1	1,383.1	116.93	12.828	
11,200.0	7,770.0	11,056.7	7,770.0	65.3	60.1	-90.04	-3,241.3	65.5	1,500.1	1,379.7	120.35	12.464	
11,300.0	7,770.0	11,156.7	7,770.0	66.9	61.9	-90.04	-3,341.3	65.5	1,500.1	1,376.3	123.77	12.120	
11,400.0	7,770.0	11,256.7	7,770.0	68.5	63.6	-90.04	-3,441.3	65.5	1,500.1	1,372.9	127.19	11.793	
11,500.0	7,770.0	11,356.7	7,770.0	70.1	65.3	-90.04	-3,541.3	65.5	1,500.1	1,369.4	130.62	11.484	
11,600.0	7,770.0	11,456.7	7,770.0	71.7	67.0	-90.04	-3,641.3	65.5	1,500.1	1,366.0	134.06	11.190	
11,700.0	7,770.0	11,556.7	7,770.0	73.3	68.7	-90.04	-3,741.3	65.5	1,500.1	1,362.6	137.49	10.910	
11,800.0	7,770.0	11,656.7	7,770.0	74.9	70.4	-90.04	-3,841.3	65.5	1,500.1	1,359.1	140.93	10.644	
11,900.0	7,770.0	11,756.7	7,770.0	76.5	72.2	-90.04	-3,941.3	65.5	1,500.1	1,355.7	144.38	10.390	
12,000.0	7,770.0	11,856.7	7,770.0	78.1	73.9	-90.04	-4,041.3	65.5	1,500.1	1,352.2	147.82	10.148	
12,100.0	7,770.0	11,956.7	7,770.0	79.8	75.6	-90.04	-4,141.3	65.5	1,500.1	1,348.8	151.27	9.916	
12,200.0	7,770.0	12,056.7	7,770.0	81.4	77.3	-90.04	-4,241.3	65.5	1,500.1	1,345.3	154.73	9.695	
12,300.0	7,770.0	12,156.7	7,770.0	83.0	79.1	-90.04	-4,341.3	65.5	1,500.1	1,341.9	158.18	9.483	
12,400.0	7,770.0	12,256.7	7,770.0	84.7	80.8	-90.04	-4,441.3	65.5	1,500.1	1,338.4	161.64	9.280	
12,500.0	7,770.0	12,356.7	7,770.0	86.3	82.5	-90.04	-4,541.3	65.5	1,500.1	1,335.0	165.10	9.086	
12,600.0	7,770.0	12,456.7	7,770.0	88.0	84.3	-90.04	-4,641.3	65.5	1,500.1	1,331.5	168.56	8.899	
12,700.0	7,770.0	12,556.7	7,770.0	89.7	86.0	-90.04	-4,741.3	65.5	1,500.1	1,328.0	172.02	8.720	
12,800.0	7,770.0	12,656.7	7,770.0	91.3	87.7	-90.04	-4,841.3	65.5	1,500.1	1,324.6	175.49	8.548	
12,900.0	7,770.0	12,756.7	7,770.0	93.0	89.5	-90.04	-4,941.3	65.5	1,500.1	1,321.1	178.95	8.382	
13,000.0	7,770.0	12,856.7	7,770.0	94.7	91.2	-90.04	-5,041.3	65.5	1,500.1	1,317.6	182.42	8.223	
13,100.0	7,770.0	12,956.7	7,770.0	96.3	92.9	-90.04	-5,141.3	65.5	1,500.1	1,314.2	185.89	8.070	
13,200.0	7,770.0	13,056.7	7,770.0	98.0	94.7	-90.04	-5,241.3	65.5	1,500.1	1,310.7	189.36	7.922	
13,300.0	7,770.0	13,156.7	7,770.0	99.7	96.4	-90.04	-5,341.3	65.5	1,500.1	1,307.2	192.83	7.779	
13,400.0	7,770.0	13,256.7	7,770.0	101.4	98.1	-90.04	-5,441.3	65.5	1,500.1	1,303.8	196.31	7.641	
13,500.0	7,770.0	13,356.7	7,770.0	103.1	99.9	-90.04	-5,541.3	65.5	1,500.1	1,300.3	199.78	7.508	
13,600.0	7,770.0	13,456.7	7,770.0	104.7	101.6	-90.04	-5,641.3	65.5	1,500.1	1,296.8	203.26	7.380	
13,700.0	7,770.0	13,556.7	7,770.0	106.4	103.3	-90.04	-5,741.3	65.5	1,500.1	1,293.3	206.74	7.256	
13,800.0	7,770.0	13,656.7	7,770.0	108.1	105.1	-90.04	-5,841.3	65.5	1,500.1	1,289.9	210.21	7.136	
13,900.0	7,770.0	13,756.7	7,770.0	109.8	106.8	-90.04	-5,941.3	65.5	1,500.1	1,286.4	213.69	7.020	
14,000.0	7,770.0	13,856.7	7,770.0	111.5	108.6	-90.04	-6,041.3	65.5	1,500.1	1,282.9	217.17	6.907	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,100.0	7,770.0	13,956.7	7,770.0	113.2	110.3	-90.04	-6,141.3	65.5	1,500.1	1,279.4	220.65	6.798	
14,200.0	7,770.0	14,056.7	7,770.0	114.9	112.0	-90.04	-6,241.3	65.5	1,500.1	1,275.9	224.14	6.693	
14,300.0	7,770.0	14,156.7	7,770.0	116.6	113.8	-90.04	-6,341.3	65.5	1,500.1	1,272.4	227.62	6.590	
14,400.0	7,770.0	14,256.7	7,770.0	118.3	115.5	-90.04	-6,441.3	65.5	1,500.1	1,269.0	231.10	6.491	
14,500.0	7,770.0	14,356.7	7,770.0	120.0	117.3	-90.04	-6,541.3	65.5	1,500.1	1,265.5	234.59	6.395	
14,600.0	7,770.0	14,456.7	7,770.0	121.7	119.0	-90.04	-6,641.3	65.5	1,500.1	1,262.0	238.07	6.301	
14,700.0	7,770.0	14,556.7	7,770.0	123.4	120.8	-90.04	-6,741.3	65.5	1,500.1	1,258.5	241.56	6.210	
14,800.0	7,770.0	14,656.7	7,770.0	125.1	122.5	-90.04	-6,841.3	65.5	1,500.1	1,255.0	245.04	6.122	
14,900.0	7,770.0	14,756.7	7,770.0	126.8	124.2	-90.04	-6,941.3	65.5	1,500.1	1,251.5	248.53	6.036	
15,000.0	7,770.0	14,856.7	7,770.0	128.5	126.0	-90.04	-7,041.3	65.5	1,500.1	1,248.1	252.02	5.952	
15,100.0	7,770.0	14,956.7	7,770.0	130.2	127.7	-90.04	-7,141.3	65.5	1,500.1	1,244.6	255.51	5.871	
15,200.0	7,770.0	15,056.7	7,770.0	132.0	129.5	-90.04	-7,241.3	65.5	1,500.1	1,241.1	258.99	5.792	
15,300.0	7,770.0	15,156.7	7,770.0	133.7	131.2	-90.04	-7,341.3	65.5	1,500.1	1,237.6	262.48	5.715	
15,400.0	7,770.0	15,256.7	7,770.0	135.4	133.0	-90.04	-7,441.3	65.5	1,500.1	1,234.1	265.97	5.640	
15,500.0	7,770.0	15,356.7	7,770.0	137.1	134.7	-90.04	-7,541.3	65.5	1,500.1	1,230.6	269.46	5.567	
15,600.0	7,770.0	15,456.7	7,770.0	138.8	136.5	-90.04	-7,641.3	65.5	1,500.1	1,227.1	272.95	5.496	
15,700.0	7,770.0	15,556.7	7,770.0	140.5	138.2	-90.04	-7,741.3	65.5	1,500.1	1,223.6	276.44	5.426	
15,800.0	7,770.0	15,656.7	7,770.0	142.2	139.9	-90.04	-7,841.3	65.5	1,500.1	1,220.1	279.93	5.359	
15,900.0	7,770.0	15,756.7	7,770.0	144.0	141.7	-90.04	-7,941.3	65.5	1,500.1	1,216.6	283.43	5.293	
16,000.0	7,770.0	15,856.7	7,770.0	145.7	143.4	-90.04	-8,041.3	65.5	1,500.1	1,213.2	286.92	5.228	
16,100.0	7,770.0	15,956.7	7,770.0	147.4	145.2	-90.04	-8,141.3	65.5	1,500.1	1,209.7	290.41	5.165	
16,200.0	7,770.0	16,056.7	7,770.0	149.1	146.9	-90.04	-8,241.3	65.5	1,500.1	1,206.2	293.90	5.104	
16,300.0	7,770.0	16,156.7	7,770.0	150.8	148.7	-90.04	-8,341.3	65.5	1,500.1	1,202.7	297.40	5.044	
16,400.0	7,770.0	16,256.7	7,770.0	152.6	150.4	-90.04	-8,441.3	65.5	1,500.1	1,199.2	300.89	4.985	
16,500.0	7,770.0	16,356.7	7,770.0	154.3	152.2	-90.04	-8,541.3	65.5	1,500.1	1,195.7	304.38	4.928	
16,600.0	7,770.0	16,456.7	7,770.0	156.0	153.9	-90.04	-8,641.3	65.5	1,500.1	1,192.2	307.88	4.872	
16,700.0	7,770.0	16,556.7	7,770.0	157.7	155.7	-90.04	-8,741.3	65.5	1,500.1	1,188.7	311.37	4.818	
16,800.0	7,770.0	16,656.7	7,770.0	159.5	157.4	-90.04	-8,841.3	65.5	1,500.1	1,185.2	314.87	4.764	
16,900.0	7,770.0	16,756.7	7,770.0	161.2	159.2	-90.04	-8,941.3	65.5	1,500.1	1,181.7	318.36	4.712	
17,000.0	7,770.0	16,856.7	7,770.0	162.9	160.9	-90.04	-9,041.3	65.5	1,500.1	1,178.2	321.86	4.661	
17,100.0	7,770.0	16,956.7	7,770.0	164.6	162.7	-90.04	-9,141.3	65.5	1,500.1	1,174.7	325.35	4.611	
17,200.0	7,770.0	17,056.7	7,770.0	166.4	164.4	-90.04	-9,241.3	65.5	1,500.1	1,171.2	328.85	4.562	
17,300.0	7,770.0	17,156.7	7,770.0	168.1	166.2	-90.04	-9,341.3	65.5	1,500.1	1,167.7	332.35	4.514	
17,400.0	7,770.0	17,256.7	7,770.0	169.8	167.9	-90.04	-9,441.3	65.5	1,500.1	1,164.2	335.84	4.467	
17,500.0	7,770.0	17,356.7	7,770.0	171.6	169.7	-90.04	-9,541.3	65.5	1,500.1	1,160.7	339.34	4.421	
17,600.0	7,770.0	17,456.7	7,770.0	173.3	171.4	-90.04	-9,641.3	65.5	1,500.1	1,157.2	342.84	4.375	
17,700.0	7,770.0	17,556.7	7,770.0	175.0	173.1	-90.04	-9,741.3	65.5	1,500.1	1,153.7	346.33	4.331	
17,775.9	7,770.0	17,632.6	7,770.0	176.3	174.5	-90.04	-9,817.2	65.5	1,500.1	1,151.1	348.99	4.298	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.30	-0.4	70.0	70.0				
100.0	100.0	99.0	99.0	0.2	0.2	90.30	-0.4	70.0	70.0	69.7	0.30	231.544	
200.0	200.0	199.0	199.0	0.3	0.3	90.30	-0.4	70.0	70.0	69.3	0.65	107.473	
250.0	250.0	249.0	249.0	0.4	0.4	90.30	-0.4	70.0	70.0	69.1	0.83	84.751	CC, ES
300.0	300.0	299.0	299.0	0.5	0.5	165.36	-0.4	70.0	70.2	69.2	1.00	70.173	
400.0	400.0	399.0	399.0	0.7	0.7	165.70	-0.4	70.0	71.9	70.5	1.35	53.274	
500.0	499.9	498.9	498.9	0.9	0.8	166.35	-0.4	70.0	75.3	73.6	1.70	44.324	
600.0	599.8	598.8	598.8	1.1	1.0	167.22	-0.4	70.0	80.3	78.3	2.05	39.263	
700.0	699.5	697.8	697.8	1.3	1.2	167.74	0.3	70.4	87.6	85.2	2.39	36.587	
800.0	799.2	796.5	796.5	1.5	1.4	167.49	2.5	71.8	97.4	94.6	2.74	35.503	
900.0	898.6	894.9	894.7	1.7	1.5	166.72	6.0	74.0	109.7	106.6	3.10	35.446	SF
1,000.0	997.9	992.7	992.4	2.0	1.7	165.61	11.0	77.2	124.6	121.2	3.45	36.085	
1,100.0	1,096.9	1,091.2	1,090.7	2.3	1.9	164.63	16.6	80.8	141.7	137.8	3.82	37.095	
1,200.0	1,195.7	1,189.5	1,188.7	2.6	2.1	164.03	22.2	84.3	160.4	156.2	4.19	38.303	
1,300.0	1,294.1	1,287.4	1,286.4	2.9	2.3	163.69	27.8	87.9	180.7	176.2	4.56	39.658	
1,400.0	1,392.3	1,384.9	1,383.7	3.3	2.5	163.55	33.4	91.5	202.7	197.8	4.93	41.126	
1,462.7	1,453.7	1,445.9	1,444.5	3.5	2.6	163.53	36.9	93.7	217.4	212.2	5.16	42.096	
1,500.0	1,490.1	1,482.1	1,480.7	3.7	2.7	163.56	39.0	95.0	226.3	221.0	5.31	42.641	
1,600.0	1,587.9	1,579.2	1,577.6	4.0	2.9	163.63	44.5	98.5	250.1	244.4	5.69	43.959	
1,700.0	1,685.7	1,676.3	1,674.5	4.4	3.1	163.68	50.0	102.0	273.9	267.9	6.07	45.101	
1,800.0	1,783.4	1,773.5	1,771.4	4.8	3.3	163.73	55.6	105.6	297.8	291.3	6.46	46.099	
1,900.0	1,881.2	1,870.6	1,868.2	5.2	3.5	163.77	61.1	109.1	321.6	314.8	6.85	46.979	
2,000.0	1,979.0	1,967.7	1,965.1	5.6	3.7	163.81	66.7	112.6	345.5	338.2	7.23	47.759	
2,100.0	2,076.7	2,064.8	2,062.0	6.0	3.9	163.84	72.2	116.2	369.3	361.7	7.62	48.456	
2,200.0	2,174.5	2,161.9	2,158.9	6.4	4.1	163.86	77.8	119.7	393.1	385.1	8.01	49.083	
2,300.0	2,272.3	2,259.0	2,255.8	6.8	4.3	163.89	83.3	123.2	417.0	408.6	8.40	49.648	
2,400.0	2,370.0	2,356.1	2,352.7	7.3	4.5	163.91	88.9	126.8	440.8	432.0	8.79	50.161	
2,500.0	2,467.8	2,453.3	2,449.6	7.7	4.7	163.93	94.4	130.3	464.7	455.5	9.18	50.629	
2,600.0	2,565.6	2,550.4	2,546.5	8.1	4.9	163.95	100.0	133.8	488.5	478.9	9.57	51.057	
2,700.0	2,663.4	2,647.5	2,643.4	8.5	5.1	163.96	105.5	137.4	512.3	502.4	9.96	51.450	
2,800.0	2,761.1	2,744.6	2,740.3	8.9	5.3	163.97	111.1	140.9	536.2	525.8	10.35	51.812	
2,900.0	2,858.9	2,841.7	2,837.2	9.3	5.5	163.99	116.6	144.4	560.0	549.3	10.74	52.147	
3,000.0	2,956.7	2,938.8	2,934.1	9.7	5.7	164.00	122.2	148.0	583.9	572.7	11.13	52.458	
3,100.0	3,054.4	3,036.0	3,031.0	10.1	5.9	164.01	127.7	151.5	607.7	596.2	11.52	52.746	
3,200.0	3,152.2	3,133.1	3,127.9	10.5	6.1	164.02	133.3	155.0	631.6	619.6	11.91	53.015	
3,300.0	3,250.0	3,230.2	3,224.8	10.9	6.3	164.03	138.8	158.6	655.4	643.1	12.30	53.266	
3,400.0	3,347.7	3,327.3	3,321.6	11.3	6.5	164.04	144.4	162.1	679.2	666.5	12.70	53.501	
3,500.0	3,445.5	3,424.4	3,418.5	11.7	6.7	164.05	149.9	165.6	703.1	690.0	13.09	53.722	
3,600.0	3,543.3	3,521.5	3,515.4	12.2	6.9	164.05	155.5	169.2	726.9	713.4	13.48	53.929	
3,700.0	3,641.0	3,618.7	3,612.3	12.6	7.2	164.06	161.0	172.7	750.8	736.9	13.87	54.124	
3,800.0	3,738.8	3,715.8	3,709.2	13.0	7.4	164.07	166.6	176.2	774.6	760.3	14.26	54.309	
3,900.0	3,836.6	3,812.9	3,806.1	13.4	7.6	164.07	172.1	179.8	798.4	783.8	14.66	54.483	
4,000.0	3,934.3	3,910.0	3,903.0	13.8	7.8	164.08	177.7	183.3	822.3	807.2	15.05	54.647	
4,100.0	4,032.1	4,007.1	3,999.9	14.2	8.0	164.09	183.2	186.8	846.1	830.7	15.44	54.803	
4,200.0	4,129.9	4,104.2	4,096.8	14.6	8.2	164.09	188.8	190.3	870.0	854.1	15.83	54.951	
4,300.0	4,227.7	4,201.4	4,193.7	15.0	8.4	164.10	194.3	193.9	893.8	877.6	16.22	55.092	
4,400.0	4,325.4	4,298.5	4,290.6	15.4	8.6	164.10	199.9	197.4	917.7	901.0	16.62	55.226	
4,500.0	4,423.2	4,395.6	4,387.5	15.9	8.8	164.11	205.4	200.9	941.5	924.5	17.01	55.354	
4,600.0	4,521.0	4,492.7	4,484.4	16.3	9.0	164.11	211.0	204.5	965.3	947.9	17.40	55.475	
4,700.0	4,618.7	4,589.8	4,581.3	16.7	9.2	164.11	216.5	208.0	989.2	971.4	17.79	55.591	
4,800.0	4,716.5	4,686.9	4,678.1	17.1	9.4	164.12	222.1	211.5	1,013.0	994.8	18.19	55.702	
4,900.0	4,814.3	4,784.1	4,775.0	17.5	9.6	164.12	227.6	215.1	1,036.9	1,018.3	18.58	55.809	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,912.0	4,881.2	4,871.9	17.9	9.8	164.12	233.2	218.6	1,060.7	1,041.7	18.97	55.910	
5,100.0	5,009.8	4,978.3	4,968.8	18.3	10.0	164.13	238.7	222.1	1,084.5	1,065.2	19.36	56.008	
5,200.0	5,107.6	5,075.4	5,065.7	18.7	10.2	164.13	244.3	225.7	1,108.4	1,088.6	19.76	56.101	
5,300.0	5,205.3	5,172.5	5,162.6	19.2	10.4	164.13	249.8	229.2	1,132.2	1,112.1	20.15	56.191	
5,400.0	5,303.1	5,269.6	5,259.5	19.6	10.6	164.14	255.4	232.7	1,156.1	1,135.5	20.54	56.277	
5,500.0	5,400.9	5,366.8	5,356.4	20.0	10.8	164.14	260.9	236.3	1,179.9	1,159.0	20.94	56.360	
5,600.0	5,498.6	5,463.9	5,453.3	20.4	11.0	164.14	266.5	239.8	1,203.8	1,182.4	21.33	56.440	
5,700.0	5,596.4	5,561.0	5,550.2	20.8	11.2	164.15	272.0	243.3	1,227.6	1,205.9	21.72	56.517	
5,800.0	5,694.2	5,658.1	5,647.1	21.2	11.4	164.15	277.6	246.9	1,251.4	1,229.3	22.11	56.591	
5,900.0	5,791.9	5,755.2	5,744.0	21.6	11.6	164.15	283.1	250.4	1,275.3	1,252.8	22.51	56.662	
6,000.0	5,889.7	5,852.3	5,840.9	22.0	11.8	164.15	288.7	253.9	1,299.1	1,276.2	22.90	56.731	
6,100.0	5,987.5	5,949.5	5,937.8	22.4	12.1	164.15	294.2	257.5	1,323.0	1,299.7	23.29	56.798	
6,200.0	6,085.3	6,046.6	6,034.7	22.9	12.3	164.16	299.8	261.0	1,346.8	1,323.1	23.69	56.862	
6,300.0	6,183.0	6,143.7	6,131.5	23.3	12.5	164.16	305.3	264.5	1,370.6	1,346.6	24.08	56.924	
6,400.0	6,280.8	6,240.8	6,228.4	23.7	12.7	164.16	310.9	268.1	1,394.5	1,370.0	24.47	56.985	
6,500.0	6,378.6	6,337.9	6,325.3	24.1	12.9	164.16	316.4	271.6	1,418.3	1,393.5	24.86	57.043	
6,600.0	6,476.3	6,435.0	6,422.2	24.5	13.1	164.16	322.0	275.1	1,442.2	1,416.9	25.26	57.099	
6,700.0	6,574.1	6,532.2	6,519.1	24.9	13.3	164.17	327.5	278.6	1,466.0	1,440.4	25.65	57.154	
6,800.0	6,671.9	6,629.3	6,616.0	25.3	13.5	164.17	333.1	282.2	1,489.9	1,463.8	26.04	57.207	
6,900.0	6,769.6	6,726.4	6,712.9	25.7	13.7	164.17	338.6	285.7	1,513.7	1,487.3	26.44	57.258	
7,000.0	6,867.4	6,824.0	6,810.3	26.2	13.9	164.21	343.3	289.3	1,537.5	1,510.7	26.81	57.355	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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) - Sosa 21-18 - DD (MWD) - DD

Offset Site Error: 0.0 ft

Survey Program: 814-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,500.0	7,770.0	7,902.4	7,759.2	86.3	25.4	89.76	-5,476.9	-2,601.9	1,496.0	1,395.4	100.64	14.865	
12,600.0	7,770.0	7,900.2	7,757.0	88.0	25.4	89.66	-5,476.9	-2,601.9	1,435.6	1,333.2	102.37	14.024	
12,700.0	7,770.0	7,898.0	7,754.9	89.7	25.4	89.55	-5,477.0	-2,601.8	1,379.8	1,275.7	104.09	13.256	
12,800.0	7,770.0	7,895.9	7,752.7	91.3	25.4	89.44	-5,477.0	-2,601.8	1,329.2	1,223.4	105.82	12.561	
12,900.0	7,770.0	7,893.7	7,750.5	93.0	25.4	89.34	-5,477.1	-2,601.7	1,284.3	1,176.8	107.54	11.943	
13,000.0	7,770.0	7,891.6	7,748.4	94.7	25.4	89.23	-5,477.1	-2,601.7	1,245.9	1,136.7	109.27	11.402	
13,100.0	7,770.0	7,889.4	7,746.3	96.3	25.4	89.13	-5,477.1	-2,601.7	1,214.6	1,103.6	111.00	10.942	
13,200.0	7,770.0	7,887.4	7,744.2	98.0	25.4	89.03	-5,477.2	-2,601.6	1,190.8	1,078.1	112.73	10.564	
13,300.0	7,770.0	7,885.3	7,742.1	99.7	25.4	88.92	-5,477.2	-2,601.6	1,175.1	1,060.6	114.45	10.267	
13,400.0	7,770.0	7,883.2	7,740.1	101.4	25.4	88.82	-5,477.3	-2,601.5	1,167.8	1,051.6	116.18	10.051	
13,436.0	7,770.0	7,882.5	7,739.3	102.0	25.4	88.79	-5,477.3	-2,601.5	1,167.2	1,050.4	116.80	9.993	CC, ES
13,500.0	7,770.0	7,881.2	7,738.0	103.1	25.4	88.73	-5,477.3	-2,601.5	1,169.0	1,051.1	117.91	9.914	
13,600.0	7,770.0	7,879.2	7,736.0	104.7	25.4	88.63	-5,477.4	-2,601.4	1,178.7	1,059.0	119.64	9.852	SF
13,700.0	7,770.0	7,877.3	7,734.1	106.4	25.4	88.53	-5,477.4	-2,601.4	1,196.7	1,075.3	121.37	9.860	
13,800.0	7,770.0	7,875.3	7,732.1	108.1	25.4	88.43	-5,477.4	-2,601.4	1,222.6	1,099.5	123.10	9.932	
13,900.0	7,770.0	7,873.4	7,730.2	109.8	25.4	88.34	-5,477.5	-2,601.3	1,256.0	1,131.2	124.83	10.062	
14,000.0	7,770.0	7,871.5	7,728.3	111.5	25.4	88.25	-5,477.5	-2,601.3	1,296.3	1,169.7	126.56	10.243	
14,100.0	7,770.0	7,869.6	7,726.4	113.2	25.4	88.15	-5,477.5	-2,601.2	1,342.8	1,214.5	128.29	10.467	
14,200.0	7,770.0	7,867.7	7,724.5	114.9	25.4	88.06	-5,477.6	-2,601.2	1,394.9	1,264.9	130.01	10.729	
14,300.0	7,770.0	7,865.8	7,722.7	116.6	25.4	87.97	-5,477.6	-2,601.2	1,452.1	1,320.4	131.74	11.022	
14,400.0	7,770.0	7,864.0	7,720.8	118.3	25.4	87.88	-5,477.7	-2,601.1	1,513.7	1,380.2	133.47	11.341	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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) - Sosa 21-18 - DD (MWD) - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,500.0	7,770.0	7,893.2	7,764.0	86.3	25.4	90.00	-5,485.2	-2,590.6	1,492.4	1,391.9	100.50	14.849	
12,600.0	7,770.0	7,893.2	7,764.0	88.0	25.4	90.00	-5,485.2	-2,590.6	1,431.2	1,329.0	102.23	14.000	
12,700.0	7,770.0	7,893.2	7,764.0	89.7	25.4	90.00	-5,485.2	-2,590.6	1,374.6	1,270.7	103.96	13.222	
12,800.0	7,770.0	7,893.2	7,764.0	91.3	25.4	90.00	-5,485.2	-2,590.6	1,323.2	1,217.5	105.69	12.519	
12,900.0	7,770.0	7,893.2	7,764.0	93.0	25.4	90.00	-5,485.2	-2,590.6	1,277.5	1,170.1	107.43	11.892	
13,000.0	7,770.0	7,893.2	7,764.0	94.7	25.4	90.00	-5,485.2	-2,590.6	1,238.3	1,129.1	109.16	11.343	
13,100.0	7,770.0	7,893.2	7,764.0	96.3	25.4	90.00	-5,485.2	-2,590.6	1,206.0	1,095.2	110.90	10.875	
13,200.0	7,770.0	7,893.2	7,764.0	98.0	25.4	90.00	-5,485.2	-2,590.6	1,181.4	1,068.8	112.63	10.489	
13,300.0	7,770.0	7,893.2	7,764.0	99.7	25.4	90.00	-5,485.2	-2,590.6	1,164.9	1,050.5	114.37	10.186	
13,400.0	7,770.0	7,893.2	7,764.0	101.4	25.4	90.00	-5,485.2	-2,590.6	1,156.8	1,040.7	116.10	9.964	
13,443.9	7,770.0	7,893.2	7,764.0	102.1	25.4	90.00	-5,485.2	-2,590.6	1,156.0	1,039.1	116.87	9.892	CC, ES
13,500.0	7,770.0	7,893.2	7,764.0	103.1	25.4	90.00	-5,485.2	-2,590.6	1,157.4	1,039.5	117.84	9.821	
13,600.0	7,770.0	7,893.2	7,764.0	104.7	25.4	90.00	-5,485.2	-2,590.6	1,166.5	1,046.9	119.58	9.755	SF
13,700.0	7,770.0	7,893.2	7,764.0	106.4	25.4	90.00	-5,485.2	-2,590.6	1,184.0	1,062.7	121.32	9.760	
13,800.0	7,770.0	7,893.2	7,764.0	108.1	25.4	90.00	-5,485.2	-2,590.6	1,209.6	1,086.5	123.06	9.830	
13,900.0	7,770.0	7,893.2	7,764.0	109.8	25.4	90.00	-5,485.2	-2,590.6	1,242.7	1,117.9	124.80	9.958	
14,000.0	7,770.0	7,893.2	7,764.0	111.5	25.4	90.00	-5,485.2	-2,590.6	1,282.8	1,156.3	126.54	10.138	
14,100.0	7,770.0	7,893.2	7,764.0	113.2	25.4	90.00	-5,485.2	-2,590.6	1,329.2	1,200.9	128.28	10.362	
14,200.0	7,770.0	7,893.2	7,764.0	114.9	25.4	90.00	-5,485.2	-2,590.6	1,381.3	1,251.3	130.02	10.624	
14,300.0	7,770.0	7,893.2	7,764.0	116.6	25.4	90.00	-5,485.2	-2,590.6	1,438.5	1,306.7	131.76	10.918	
14,400.0	7,770.0	7,893.2	7,764.0	118.3	25.4	90.00	-5,485.2	-2,590.6	1,500.2	1,366.7	133.50	11.237	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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) - Sosa 22-18 - DD - DD

Offset Site Error: 0.0 ft

Survey Program: 41-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,100.0	7,770.0	7,913.9	7,778.1	113.2	25.7	90.65	-6,970.3	-2,677.2	1,493.8	1,363.4	130.44	11.452	
14,200.0	7,770.0	7,913.9	7,778.1	114.9	25.7	90.65	-6,970.3	-2,677.2	1,440.7	1,308.6	132.18	10.899	
14,300.0	7,770.0	7,913.9	7,778.0	116.6	25.7	90.65	-6,970.3	-2,677.2	1,392.8	1,258.9	133.92	10.400	
14,400.0	7,770.0	7,913.9	7,778.0	118.3	25.7	90.65	-6,970.3	-2,677.2	1,350.6	1,214.9	135.67	9.955	
14,500.0	7,770.0	7,913.9	7,778.0	120.0	25.7	90.65	-6,970.3	-2,677.2	1,314.7	1,177.3	137.41	9.568	
14,600.0	7,770.0	7,913.8	7,778.0	121.7	25.7	90.64	-6,970.3	-2,677.2	1,285.5	1,146.4	139.15	9.238	
14,700.0	7,770.0	7,913.8	7,778.0	123.4	25.7	90.64	-6,970.3	-2,677.2	1,263.6	1,122.7	140.89	8.969	
14,800.0	7,770.0	7,913.8	7,778.0	125.1	25.7	90.64	-6,970.3	-2,677.2	1,249.4	1,106.8	142.64	8.759	
14,900.0	7,770.0	7,913.8	7,778.0	126.8	25.7	90.64	-6,970.3	-2,677.2	1,243.1	1,098.7	144.38	8.610	
14,928.9	7,770.0	7,913.8	7,777.9	127.3	25.7	90.64	-6,970.3	-2,677.2	1,242.7	1,097.8	144.88	8.577	CC, ES
15,000.0	7,770.0	7,913.8	7,777.9	128.5	25.7	90.64	-6,970.3	-2,677.2	1,244.7	1,098.6	146.12	8.519	
15,100.0	7,770.0	7,913.8	7,777.9	130.2	25.7	90.64	-6,970.3	-2,677.2	1,254.4	1,106.6	147.87	8.484	SF
15,200.0	7,770.0	7,913.8	7,777.9	132.0	25.7	90.64	-6,970.3	-2,677.2	1,271.9	1,122.3	149.61	8.502	
15,300.0	7,770.0	7,913.7	7,777.9	133.7	25.7	90.64	-6,970.3	-2,677.2	1,296.9	1,145.6	151.35	8.569	
15,400.0	7,770.0	7,913.7	7,777.9	135.4	25.7	90.64	-6,970.3	-2,677.2	1,329.0	1,175.9	153.10	8.681	
15,500.0	7,770.0	7,913.7	7,777.9	137.1	25.7	90.64	-6,970.3	-2,677.2	1,367.6	1,212.8	154.84	8.832	
15,600.0	7,770.0	7,913.7	7,777.9	138.8	25.7	90.64	-6,970.3	-2,677.2	1,412.3	1,255.7	156.59	9.019	
15,700.0	7,770.0	7,913.7	7,777.8	140.5	25.7	90.64	-6,970.3	-2,677.2	1,462.5	1,304.2	158.33	9.237	
15,800.0	7,770.0	7,913.7	7,777.8	142.2	25.7	90.64	-6,970.3	-2,677.2	1,517.6	1,357.5	160.08	9.480	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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) - Sosa 22-18 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,100.0	7,770.0	7,887.1	7,764.0	113.2	25.3	90.00	-6,953.2	-2,694.7	1,499.0	1,368.8	130.23	11.510	
14,200.0	7,770.0	7,887.1	7,764.0	114.9	25.3	90.00	-6,953.2	-2,694.7	1,447.3	1,315.3	131.97	10.967	
14,300.0	7,770.0	7,887.1	7,764.0	116.6	25.3	90.00	-6,953.2	-2,694.7	1,400.8	1,267.1	133.71	10.476	
14,400.0	7,770.0	7,887.1	7,764.0	118.3	25.3	90.00	-6,953.2	-2,694.7	1,360.1	1,224.7	135.45	10.041	
14,500.0	7,770.0	7,887.1	7,764.0	120.0	25.3	90.00	-6,953.2	-2,694.7	1,325.7	1,188.5	137.20	9.663	
14,600.0	7,770.0	7,887.1	7,764.0	121.7	25.3	90.00	-6,953.2	-2,694.7	1,298.1	1,159.2	138.94	9.343	
14,700.0	7,770.0	7,887.1	7,764.0	123.4	25.3	90.00	-6,953.2	-2,694.7	1,277.8	1,137.1	140.68	9.083	
14,800.0	7,770.0	7,887.1	7,764.0	125.1	25.3	90.00	-6,953.2	-2,694.7	1,265.1	1,122.6	142.42	8.882	
14,900.0	7,770.0	7,887.1	7,764.0	126.8	25.3	90.00	-6,953.2	-2,694.7	1,260.2	1,116.0	144.17	8.741	
14,911.9	7,770.0	7,887.1	7,764.0	127.0	25.3	90.00	-6,953.2	-2,694.7	1,260.1	1,115.7	144.37	8.728	CC, ES
15,000.0	7,770.0	7,887.1	7,764.0	128.5	25.3	90.00	-6,953.2	-2,694.7	1,263.2	1,117.3	145.91	8.657	
15,100.0	7,770.0	7,887.1	7,764.0	130.2	25.3	90.00	-6,953.2	-2,694.7	1,274.1	1,126.4	147.66	8.629	SF
15,200.0	7,770.0	7,887.1	7,764.0	132.0	25.3	90.00	-6,953.2	-2,694.7	1,292.6	1,143.2	149.40	8.652	
15,300.0	7,770.0	7,887.1	7,764.0	133.7	25.3	90.00	-6,953.2	-2,694.7	1,318.5	1,167.4	151.14	8.724	
15,400.0	7,770.0	7,887.1	7,764.0	135.4	25.3	90.00	-6,953.2	-2,694.7	1,351.3	1,198.5	152.89	8.839	
15,500.0	7,770.0	7,887.1	7,764.0	137.1	25.3	90.00	-6,953.2	-2,694.7	1,390.6	1,236.0	154.63	8.993	
15,600.0	7,770.0	7,887.1	7,764.0	138.8	25.3	90.00	-6,953.2	-2,694.7	1,435.7	1,279.4	156.38	9.181	
15,700.0	7,770.0	7,887.1	7,764.0	140.5	25.3	90.00	-6,953.2	-2,694.7	1,486.3	1,328.1	158.12	9.399	
15,800.0	7,770.0	7,887.1	7,764.0	142.2	25.3	90.00	-6,953.2	-2,694.7	1,541.6	1,381.8	159.87	9.643	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 24-7 (EXISTING) - ENCANA WELL - SU

Offset Site Error: 0.0 ft

Survey Program: 1024-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,400.0	7,770.0	7,775.2	7,762.7	68.5	14.4	90.48	-4,303.5	-2,709.1	1,538.9	1,461.5	77.34	19.899	
11,500.0	7,770.0	7,774.9	7,762.4	70.1	14.4	90.47	-4,303.5	-2,709.1	1,485.1	1,406.1	79.05	18.788	
11,600.0	7,770.0	7,774.6	7,762.0	71.7	14.4	90.45	-4,303.5	-2,709.1	1,436.4	1,355.6	80.76	17.785	
11,700.0	7,770.0	7,774.2	7,761.7	73.3	14.4	90.44	-4,303.5	-2,709.2	1,393.1	1,310.6	82.48	16.890	
11,800.0	7,770.0	7,773.9	7,761.3	74.9	14.4	90.42	-4,303.5	-2,709.2	1,355.8	1,271.6	84.20	16.102	
11,900.0	7,770.0	7,773.5	7,761.0	76.5	14.4	90.40	-4,303.5	-2,709.2	1,325.1	1,239.2	85.92	15.422	
12,000.0	7,770.0	7,773.2	7,760.7	78.1	14.4	90.39	-4,303.5	-2,709.2	1,301.3	1,213.7	87.65	14.847	
12,100.0	7,770.0	7,772.8	7,760.3	79.8	14.4	90.37	-4,303.5	-2,709.2	1,284.9	1,195.5	89.37	14.377	
12,200.0	7,770.0	7,772.5	7,760.0	81.4	14.4	90.36	-4,303.5	-2,709.2	1,276.1	1,185.0	91.10	14.009	
12,262.2	7,770.0	7,772.3	7,759.8	82.4	14.4	90.35	-4,303.5	-2,709.2	1,274.6	1,182.5	92.17	13.829	CC
12,300.0	7,770.0	7,772.2	7,759.6	83.0	14.4	90.34	-4,303.5	-2,709.2	1,275.2	1,182.4	92.82	13.738	ES
12,400.0	7,770.0	7,771.8	7,759.3	84.7	14.4	90.33	-4,303.5	-2,709.2	1,282.1	1,187.5	94.55	13.559	
12,500.0	7,770.0	7,771.5	7,759.0	86.3	14.4	90.31	-4,303.5	-2,709.2	1,296.6	1,200.3	96.28	13.467	
12,600.0	7,770.0	7,771.1	7,758.6	88.0	14.4	90.30	-4,303.5	-2,709.2	1,318.6	1,220.6	98.01	13.454	SF
12,700.0	7,770.0	7,770.8	7,758.3	89.7	14.4	90.28	-4,303.5	-2,709.2	1,347.7	1,248.0	99.74	13.512	
12,800.0	7,770.0	7,770.5	7,757.9	91.3	14.4	90.27	-4,303.5	-2,709.2	1,383.4	1,282.0	101.47	13.634	
12,900.0	7,770.0	7,770.1	7,757.6	93.0	14.4	90.25	-4,303.5	-2,709.2	1,425.3	1,322.1	103.20	13.810	
13,000.0	7,770.0	7,769.8	7,757.2	94.7	14.4	90.24	-4,303.5	-2,709.2	1,472.7	1,367.8	104.94	14.035	
13,100.0	7,770.0	7,769.4	7,756.9	96.3	14.4	90.22	-4,303.5	-2,709.2	1,525.3	1,418.6	106.67	14.299	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,500.0	7,770.0	8,025.3	7,754.0	40.8	34.9	90.95	-3,010.3	-1,613.0	1,479.8	1,422.7	57.06	25.931	
9,600.0	7,770.0	8,025.1	7,753.8	42.0	34.9	90.89	-3,010.3	-1,613.0	1,380.5	1,321.9	58.66	23.535	
9,700.0	7,770.0	8,024.9	7,753.6	43.3	34.9	90.84	-3,010.3	-1,613.0	1,281.4	1,221.2	60.27	21.262	
9,800.0	7,770.0	8,024.8	7,753.5	44.6	34.9	90.79	-3,010.3	-1,613.0	1,182.5	1,120.6	61.89	19.106	
9,900.0	7,770.0	8,024.6	7,753.3	46.0	34.9	90.73	-3,010.3	-1,613.0	1,083.7	1,020.2	63.53	17.060	
10,000.0	7,770.0	8,024.4	7,753.1	47.4	34.9	90.68	-3,010.3	-1,613.0	985.2	920.1	65.17	15.118	
10,100.0	7,770.0	8,024.3	7,753.0	48.7	34.9	90.63	-3,010.3	-1,613.0	887.1	820.3	66.82	13.275	
10,200.0	7,770.0	8,024.1	7,752.8	50.2	34.9	90.58	-3,010.3	-1,613.0	789.4	720.9	68.48	11.527	
10,300.0	7,770.0	8,024.0	7,752.6	51.6	34.9	90.53	-3,010.3	-1,613.0	692.3	622.2	70.15	9.869	
10,400.0	7,770.0	8,023.8	7,752.5	53.1	34.9	90.48	-3,010.3	-1,613.0	596.3	524.4	71.83	8.302	
10,500.0	7,770.0	8,023.6	7,752.3	54.6	34.9	90.43	-3,010.3	-1,613.0	501.7	428.2	73.51	6.826	
10,600.0	7,770.0	8,023.5	7,752.2	56.1	34.9	90.38	-3,010.3	-1,613.0	409.8	334.6	75.19	5.450	
10,700.0	7,770.0	8,023.3	7,752.0	57.6	34.9	90.33	-3,010.3	-1,613.0	322.8	245.9	76.88	4.198	
10,800.0	7,770.0	8,023.2	7,751.9	59.1	34.9	90.28	-3,010.3	-1,613.0	245.7	167.1	78.57	3.127	
10,900.0	7,770.0	8,023.0	7,751.7	60.6	34.9	90.23	-3,010.3	-1,613.0	191.3	111.0	80.27	2.383	
10,969.0	7,770.0	8,022.9	7,751.6	61.7	34.9	90.20	-3,010.3	-1,613.0	178.4	97.0	81.44	2.190	CC, ES, SF
11,000.0	7,770.0	8,022.9	7,751.6	62.2	34.9	90.19	-3,010.3	-1,613.0	181.1	99.1	81.97	2.209	
11,100.0	7,770.0	8,022.8	7,751.4	63.7	34.9	90.14	-3,010.3	-1,613.0	221.4	137.7	83.68	2.645	
11,200.0	7,770.0	8,022.6	7,751.3	65.3	34.9	90.10	-3,010.3	-1,613.0	291.9	206.5	85.38	3.419	
11,300.0	7,770.0	8,022.5	7,751.2	66.9	34.9	90.05	-3,010.3	-1,613.0	376.0	289.0	87.09	4.318	
11,400.0	7,770.0	8,022.3	7,751.0	68.5	34.9	90.01	-3,010.3	-1,613.0	466.5	377.7	88.80	5.253	
11,500.0	7,770.0	8,022.2	7,750.9	70.1	34.9	89.96	-3,010.3	-1,613.0	560.2	469.7	90.52	6.189	
11,600.0	7,770.0	8,022.1	7,750.8	71.7	34.9	89.92	-3,010.3	-1,613.0	655.8	563.5	92.23	7.110	
11,700.0	7,770.0	8,021.9	7,750.6	73.3	34.9	89.87	-3,010.3	-1,613.0	752.5	658.5	93.95	8.009	
11,800.0	7,770.0	8,021.8	7,750.5	74.9	34.9	89.83	-3,010.3	-1,613.0	850.0	754.3	95.67	8.884	
11,900.0	7,770.0	8,021.7	7,750.4	76.5	34.9	89.79	-3,010.3	-1,613.0	948.0	850.6	97.39	9.734	
12,000.0	7,770.0	8,021.5	7,750.2	78.1	34.9	89.75	-3,010.3	-1,613.0	1,046.4	947.2	99.11	10.557	
12,100.0	7,770.0	8,021.4	7,750.1	79.8	34.9	89.70	-3,010.3	-1,613.0	1,145.0	1,044.2	100.84	11.355	
12,200.0	7,770.0	8,021.3	7,750.0	81.4	34.9	89.66	-3,010.3	-1,613.0	1,243.9	1,141.3	102.56	12.128	
12,300.0	7,770.0	8,021.1	7,749.8	83.0	34.9	89.62	-3,010.3	-1,613.0	1,342.9	1,238.7	104.29	12.877	
12,400.0	7,770.0	8,021.0	7,749.7	84.7	34.9	89.58	-3,010.3	-1,613.0	1,442.1	1,336.1	106.01	13.603	
12,500.0	7,770.0	8,020.9	7,749.6	86.3	34.9	89.54	-3,010.3	-1,613.0	1,541.4	1,433.7	107.74	14.306	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 22-7 (EXISTING) - ENCANA WELL - S

Offset Site Error: 0.0 ft

Survey Program: 71-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,800.0	7,770.0	8,015.2	7,792.6	33.3	29.0	89.98	-1,715.2	-2,709.7	1,545.9	1,495.7	50.22	30.782	
8,900.0	7,770.0	8,014.7	7,792.1	34.2	29.0	89.96	-1,715.2	-2,709.7	1,491.6	1,440.0	51.60	28.908	
9,000.0	7,770.0	8,014.1	7,791.5	35.2	29.0	89.93	-1,715.2	-2,709.7	1,442.3	1,389.3	53.03	27.199	
9,100.0	7,770.0	8,013.5	7,791.0	36.2	29.0	89.91	-1,715.2	-2,709.7	1,398.4	1,343.9	54.50	25.660	
9,200.0	7,770.0	8,013.0	7,790.4	37.3	29.0	89.88	-1,715.2	-2,709.7	1,360.4	1,304.4	56.00	24.293	
9,300.0	7,770.0	8,012.4	7,789.8	38.4	29.0	89.86	-1,715.2	-2,709.7	1,328.9	1,271.3	57.53	23.099	
9,400.0	7,770.0	8,011.9	7,789.3	39.6	29.0	89.83	-1,715.2	-2,709.7	1,304.3	1,245.2	59.08	22.075	
9,500.0	7,770.0	8,011.3	7,788.7	40.8	29.0	89.81	-1,715.2	-2,709.7	1,287.0	1,226.3	60.66	21.217	
9,600.0	7,770.0	8,010.7	7,788.2	42.0	29.0	89.78	-1,715.2	-2,709.7	1,277.3	1,215.1	62.25	20.518	
9,673.9	7,770.0	8,010.3	7,787.7	43.0	29.0	89.76	-1,715.2	-2,709.7	1,275.2	1,211.7	63.44	20.100	CC
9,700.0	7,770.0	8,010.2	7,787.6	43.3	29.0	89.76	-1,715.2	-2,709.7	1,275.4	1,211.6	63.86	19.972	ES
9,800.0	7,770.0	8,009.6	7,787.0	44.6	29.0	89.73	-1,715.2	-2,709.7	1,281.4	1,215.9	65.48	19.568	
9,900.0	7,770.0	8,009.1	7,786.5	46.0	29.0	89.71	-1,715.2	-2,709.7	1,295.1	1,227.9	67.12	19.296	
10,000.0	7,770.0	8,008.5	7,785.9	47.4	29.0	89.68	-1,715.2	-2,709.7	1,316.2	1,247.4	68.76	19.142	
10,100.0	7,770.0	8,008.0	7,785.4	48.7	29.0	89.66	-1,715.3	-2,709.7	1,344.5	1,274.1	70.41	19.094	SF
10,200.0	7,770.0	8,007.4	7,784.8	50.2	29.0	89.63	-1,715.3	-2,709.7	1,379.4	1,307.3	72.07	19.140	
10,300.0	7,770.0	8,006.9	7,784.3	51.6	29.0	89.61	-1,715.3	-2,709.7	1,420.6	1,346.8	73.74	19.265	
10,400.0	7,770.0	8,006.3	7,783.7	53.1	29.0	89.58	-1,715.3	-2,709.7	1,467.4	1,392.0	75.41	19.458	
10,500.0	7,770.0	8,005.8	7,783.2	54.6	29.0	89.56	-1,715.3	-2,709.7	1,519.3	1,442.3	77.09	19.708	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 4-0-7 (EXISTING) - ENCANA WELL - S

Offset Site Error: 0.0 ft

Survey Program: 71-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
4,800.0	4,716.5	4,803.3	4,722.6	17.1	16.2	-13.12	271.2	-2,338.7	1,539.1	1,517.7	21.42	71.851	
4,900.0	4,814.3	4,893.2	4,812.6	17.5	16.2	-13.31	270.5	-2,340.0	1,520.0	1,498.3	21.70	70.050	
5,000.0	4,912.0	4,995.7	4,915.0	17.9	16.3	-13.55	269.4	-2,341.6	1,501.0	1,479.0	21.99	68.268	
5,100.0	5,009.8	5,095.1	5,014.4	18.3	16.4	-13.80	268.0	-2,342.9	1,481.8	1,459.5	22.28	66.513	
5,200.0	5,107.6	5,191.7	5,111.0	18.7	16.4	-14.04	266.8	-2,344.1	1,462.7	1,440.1	22.57	64.796	
5,300.0	5,205.3	5,288.9	5,208.2	19.2	16.5	-14.29	265.8	-2,345.5	1,443.6	1,420.7	22.88	63.106	
5,400.0	5,303.1	5,386.5	5,305.8	19.6	16.6	-14.52	265.1	-2,346.9	1,424.6	1,401.4	23.18	61.448	
5,500.0	5,400.9	5,487.3	5,406.5	20.0	16.7	-14.77	264.6	-2,348.2	1,405.6	1,382.1	23.51	59.793	
5,600.0	5,498.6	5,587.3	5,506.6	20.4	16.8	-15.00	264.5	-2,349.4	1,386.4	1,362.5	23.83	58.167	
5,700.0	5,596.4	5,682.1	5,601.3	20.8	16.9	-15.21	264.6	-2,350.5	1,367.2	1,343.1	24.16	56.584	
5,800.0	5,694.2	5,778.4	5,697.6	21.2	16.9	-15.42	265.1	-2,351.9	1,348.3	1,323.8	24.50	55.041	
5,900.0	5,791.9	5,877.7	5,797.0	21.6	17.0	-15.63	265.8	-2,353.3	1,329.4	1,304.6	24.84	53.518	
6,000.0	5,889.7	5,977.4	5,896.6	22.0	17.1	-15.85	266.6	-2,354.6	1,310.5	1,285.3	25.19	52.022	
6,100.0	5,987.5	6,077.3	5,996.5	22.4	17.3	-16.06	267.7	-2,355.7	1,291.4	1,265.8	25.54	50.554	
6,200.0	6,085.3	6,178.2	6,097.4	22.9	17.4	-16.27	269.0	-2,356.8	1,272.1	1,246.2	25.91	49.098	
6,300.0	6,183.0	6,279.0	6,198.2	23.3	17.5	-16.46	270.8	-2,357.5	1,252.6	1,226.4	26.28	47.669	
6,400.0	6,280.8	6,376.6	6,295.8	23.7	17.6	-16.65	272.6	-2,358.2	1,233.1	1,206.4	26.64	46.288	
6,500.0	6,378.6	6,473.5	6,392.7	24.1	17.7	-16.85	274.2	-2,358.9	1,213.6	1,186.6	27.00	44.944	
6,600.0	6,476.3	6,568.9	6,488.0	24.5	17.8	-17.06	275.6	-2,359.7	1,194.3	1,166.9	27.36	43.643	
6,700.0	6,574.1	6,666.7	6,585.8	24.9	17.9	-17.29	277.0	-2,360.7	1,175.2	1,147.4	27.74	42.369	
6,800.0	6,671.9	6,767.2	6,686.3	25.3	18.1	-17.53	278.6	-2,361.7	1,155.9	1,127.8	28.12	41.110	
6,900.0	6,769.6	6,865.7	6,784.8	25.7	18.2	-17.77	280.2	-2,362.4	1,136.5	1,108.0	28.49	39.889	
7,000.0	6,867.4	6,963.4	6,882.5	26.2	18.3	-18.03	281.4	-2,363.1	1,117.2	1,088.3	28.87	38.698	
7,100.0	6,965.2	7,071.0	6,990.0	26.6	18.5	-18.32	282.9	-2,363.5	1,097.5	1,068.2	29.28	37.477	
7,167.0	7,030.7	7,143.2	7,062.2	26.8	18.6	-18.49	284.6	-2,363.3	1,083.8	1,054.2	29.56	36.662	
7,200.0	7,063.0	7,176.0	7,095.0	27.0	18.6	-5.56	285.5	-2,363.1	1,076.9	1,047.3	29.61	36.367	
7,250.0	7,111.9	7,225.5	7,144.5	27.2	18.7	14.21	286.8	-2,362.7	1,066.2	1,036.6	29.65	35.961	
7,300.0	7,160.6	7,274.7	7,193.7	27.3	18.8	31.15	288.1	-2,362.3	1,055.4	1,025.8	29.67	35.579	
7,350.0	7,208.9	7,323.2	7,242.1	27.5	18.8	44.20	289.4	-2,361.9	1,044.6	1,014.9	29.68	35.201	
7,400.0	7,256.5	7,369.5	7,288.4	27.6	18.9	54.04	290.6	-2,361.5	1,033.9	1,004.2	29.70	34.812	
7,450.0	7,303.1	7,414.9	7,333.8	27.8	19.0	61.68	291.7	-2,361.2	1,023.6	993.8	29.76	34.393	
7,500.0	7,348.7	7,459.1	7,378.0	27.9	19.0	67.85	292.8	-2,360.8	1,013.8	983.9	29.88	33.934	
7,550.0	7,392.8	7,502.7	7,421.5	28.0	19.1	73.02	293.7	-2,360.6	1,004.8	974.7	30.05	33.434	
7,600.0	7,435.4	7,546.8	7,465.7	28.1	19.2	77.55	294.7	-2,360.3	996.8	966.5	30.30	32.896	
7,650.0	7,476.2	7,588.9	7,507.8	28.2	19.2	81.52	295.7	-2,359.8	990.0	959.4	30.60	32.354	
7,700.0	7,515.1	7,628.8	7,547.6	28.3	19.3	85.03	296.6	-2,359.4	984.7	953.8	30.92	31.845	
7,750.0	7,551.7	7,666.3	7,585.1	28.4	19.3	88.11	297.5	-2,358.9	981.3	950.0	31.24	31.407	
7,800.0	7,586.0	7,699.4	7,618.3	28.5	19.4	90.71	298.3	-2,358.4	980.1	948.5	31.53	31.086	
7,800.3	7,586.2	7,699.6	7,618.5	28.5	19.4	90.72	298.3	-2,358.4	980.1	948.5	31.53	31.084	CC, ES
7,850.0	7,617.8	7,730.0	7,648.8	28.6	19.4	92.89	299.0	-2,358.0	981.3	949.6	31.77	30.893	
7,900.0	7,646.9	7,757.9	7,676.7	28.7	19.5	94.64	299.7	-2,357.6	985.3	953.4	31.95	30.841	SF
7,950.0	7,673.1	7,782.9	7,701.7	28.8	19.5	95.97	300.3	-2,357.2	992.2	960.2	32.08	30.932	
8,000.0	7,696.5	7,804.9	7,723.7	29.0	19.6	96.84	300.8	-2,356.9	1,002.2	970.0	32.16	31.160	
8,050.0	7,716.7	7,823.9	7,742.7	29.1	19.6	97.25	301.3	-2,356.7	1,015.2	983.0	32.22	31.510	
8,100.0	7,733.9	7,839.7	7,758.5	29.3	19.6	97.16	301.7	-2,356.5	1,031.3	999.0	32.26	31.963	
8,150.0	7,747.7	7,852.5	7,771.2	29.4	19.6	96.57	302.0	-2,356.3	1,050.4	1,018.1	32.32	32.497	
8,200.0	7,758.3	7,861.9	7,780.6	29.6	19.6	95.44	302.2	-2,356.2	1,072.4	1,040.0	32.41	33.085	
8,250.0	7,765.5	7,867.9	7,786.7	29.8	19.7	93.75	302.4	-2,356.1	1,097.1	1,064.5	32.55	33.705	
8,300.0	7,769.3	7,870.6	7,789.3	30.0	19.7	91.47	302.4	-2,356.0	1,124.2	1,091.4	32.74	34.335	
8,330.9	7,770.0	7,870.5	7,789.2	30.2	19.7	89.77	302.4	-2,356.0	1,142.0	1,109.2	32.89	34.721	
8,400.0	7,770.0	7,868.8	7,787.6	30.5	19.7	89.66	302.4	-2,356.1	1,184.2	1,150.6	33.55	35.293	
8,500.0	7,770.0	7,866.4	7,785.2	31.1	19.6	89.51	302.3	-2,356.1	1,249.4	1,214.8	34.61	36.098	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 4-0-7 (EXISTING) - ENCANA WELL - S

Offset Site Error: 0.0 ft

Survey Program: 71-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,600.0	7,770.0	7,864.0	7,782.7	31.8	19.6	89.36	302.3	-2,356.1	1,319.0	1,283.2	35.77	36.871	
8,700.0	7,770.0	7,861.5	7,780.3	32.5	19.6	89.21	302.2	-2,356.2	1,392.3	1,355.2	37.02	37.609	
8,800.0	7,770.0	7,859.1	7,777.8	33.3	19.6	89.06	302.1	-2,356.2	1,468.7	1,430.4	38.34	38.311	
8,900.0	7,770.0	7,856.6	7,775.4	34.2	19.6	88.90	302.1	-2,356.2	1,547.8	1,508.1	39.71	38.978	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-137.13	-188.7	-175.2	257.5				
100.0	100.0	96.0	96.0	0.2	0.2	-137.13	-188.7	-175.2	257.5	257.2	0.32	805.664	
200.0	200.0	196.0	196.0	0.3	0.3	-137.13	-188.7	-175.2	257.5	256.8	0.67	385.077	
250.0	250.0	246.0	246.0	0.4	0.4	-137.13	-188.7	-175.2	257.5	256.6	0.84	305.370	
300.0	300.0	296.0	296.0	0.5	0.5	-62.15	-188.7	-175.2	257.4	256.4	1.02	252.892	
400.0	400.0	396.0	396.0	0.7	0.7	-62.51	-188.7	-175.2	256.6	255.2	1.37	187.505	
500.0	499.9	495.9	495.9	0.9	0.9	-63.22	-188.7	-175.2	255.0	253.3	1.72	147.955	
600.0	599.8	595.8	595.8	1.1	1.0	-64.30	-188.7	-175.2	252.7	250.6	2.09	121.120	
700.0	699.5	695.5	695.5	1.3	1.2	-65.76	-188.7	-175.2	249.7	247.3	2.46	101.509	
800.0	799.2	795.2	795.2	1.5	1.4	-67.64	-188.7	-175.2	246.3	243.4	2.85	86.431	
900.0	898.6	894.6	894.6	1.7	1.6	-69.95	-188.7	-175.2	242.5	239.2	3.26	74.428	
1,000.0	997.9	993.9	993.9	2.0	1.7	-72.72	-188.7	-175.2	238.5	234.8	3.69	64.653	
1,100.0	1,096.9	1,092.9	1,092.9	2.3	1.9	-75.97	-188.7	-175.2	234.7	230.6	4.15	56.593	
1,200.0	1,195.7	1,191.7	1,191.7	2.6	2.1	-79.72	-188.7	-175.2	231.4	226.8	4.64	49.924	
1,300.0	1,294.1	1,290.1	1,290.1	2.9	2.3	-83.96	-188.7	-175.2	228.9	223.7	5.15	44.437	
1,400.0	1,392.3	1,388.3	1,388.3	3.3	2.4	-88.66	-188.7	-175.2	227.6	222.0	5.69	39.993	
1,426.9	1,418.6	1,414.6	1,414.6	3.4	2.5	-90.00	-188.7	-175.2	227.6	221.7	5.84	38.962 CC	
1,462.7	1,453.7	1,449.7	1,449.7	3.5	2.5	-91.82	-188.7	-175.2	227.7	221.7	6.04	37.709 ES	
1,500.0	1,490.1	1,486.1	1,486.1	3.7	2.6	-93.75	-188.7	-175.2	228.1	221.8	6.24	36.536	
1,600.0	1,587.9	1,583.9	1,583.9	4.0	2.8	-98.85	-188.7	-175.2	230.4	223.7	6.78	33.988	
1,700.0	1,685.7	1,681.7	1,681.7	4.4	2.9	-103.82	-188.7	-175.2	234.7	227.4	7.30	32.160	
1,800.0	1,783.4	1,779.4	1,779.4	4.8	3.1	-108.59	-188.7	-175.2	240.7	232.9	7.79	30.901	
1,900.0	1,881.2	1,877.2	1,877.2	5.2	3.3	-113.10	-188.7	-175.2	248.3	240.0	8.25	30.090	
2,000.0	1,979.0	1,975.0	1,975.0	5.6	3.4	-117.33	-188.7	-175.2	257.4	248.7	8.69	29.629	
2,100.0	2,076.7	2,072.7	2,072.7	6.0	3.6	-121.26	-188.7	-175.2	267.9	258.8	9.10	29.442 SF	
2,200.0	2,174.5	2,170.5	2,170.5	6.4	3.8	-124.89	-188.7	-175.2	279.5	270.0	9.49	29.467	
2,300.0	2,272.3	2,268.3	2,268.3	6.8	4.0	-128.22	-188.7	-175.2	292.2	282.4	9.85	29.654	
2,400.0	2,370.0	2,366.0	2,366.0	7.3	4.1	-131.28	-188.7	-175.2	305.8	295.6	10.21	29.963	
2,500.0	2,467.8	2,463.8	2,463.8	7.7	4.3	-134.07	-188.7	-175.2	320.3	309.7	10.55	30.366	
2,600.0	2,565.6	2,561.6	2,561.6	8.1	4.5	-136.62	-188.7	-175.2	335.4	324.5	10.88	30.836	
2,700.0	2,663.4	2,659.4	2,659.4	8.5	4.6	-138.95	-188.7	-175.2	351.1	339.9	11.20	31.354	
2,800.0	2,761.1	2,757.1	2,757.1	8.9	4.8	-141.09	-188.7	-175.2	367.3	355.8	11.51	31.905	
2,900.0	2,858.9	2,854.9	2,854.9	9.3	5.0	-143.04	-188.7	-175.2	384.1	372.2	11.82	32.478	
3,000.0	2,956.7	2,952.7	2,952.7	9.7	5.2	-144.83	-188.7	-175.2	401.2	389.0	12.13	33.063	
3,100.0	3,054.4	3,050.4	3,050.4	10.1	5.3	-146.48	-188.7	-175.2	418.6	406.2	12.44	33.653	
3,200.0	3,152.2	3,148.2	3,148.2	10.5	5.5	-147.99	-188.7	-175.2	436.4	423.7	12.75	34.243	
3,300.0	3,250.0	3,246.0	3,246.0	10.9	5.7	-149.39	-188.7	-175.2	454.5	441.4	13.05	34.827	
3,400.0	3,347.7	3,343.7	3,343.7	11.3	5.8	-150.68	-188.7	-175.2	472.8	459.4	13.35	35.403	
3,500.0	3,445.5	3,441.5	3,441.5	11.7	6.0	-151.87	-188.7	-175.2	491.3	477.6	13.66	35.969	
3,600.0	3,543.3	3,539.3	3,539.3	12.2	6.2	-152.98	-188.7	-175.2	510.0	496.0	13.96	36.523	
3,700.0	3,641.0	3,637.0	3,637.0	12.6	6.3	-154.01	-188.7	-175.2	528.9	514.6	14.27	37.063	
3,800.0	3,738.8	3,734.8	3,734.8	13.0	6.5	-154.97	-188.7	-175.2	547.9	533.4	14.58	37.589	
3,900.0	3,836.6	3,832.6	3,832.6	13.4	6.7	-155.86	-188.7	-175.2	567.1	552.2	14.88	38.101	
4,000.0	3,934.3	3,930.3	3,930.3	13.8	6.9	-156.70	-188.7	-175.2	586.4	571.2	15.19	38.597	
4,100.0	4,032.1	4,028.1	4,028.1	14.2	7.0	-157.48	-188.7	-175.2	605.8	590.3	15.50	39.078	
4,200.0	4,129.9	4,125.9	4,125.9	14.6	7.2	-158.22	-188.7	-175.2	625.3	609.5	15.81	39.545	
4,300.0	4,227.7	4,223.7	4,223.7	15.0	7.4	-158.91	-188.7	-175.2	645.0	628.8	16.13	39.996	
4,400.0	4,325.4	4,321.4	4,321.4	15.4	7.5	-159.56	-188.7	-175.2	664.7	648.2	16.44	40.433	
4,500.0	4,423.2	4,419.2	4,419.2	15.9	7.7	-160.17	-188.7	-175.2	684.4	667.7	16.75	40.856	
4,600.0	4,521.0	4,517.0	4,517.0	16.3	7.9	-160.75	-188.7	-175.2	704.3	687.2	17.07	41.265	
4,700.0	4,618.7	4,614.7	4,614.7	16.7	8.1	-161.30	-188.7	-175.2	724.2	706.8	17.38	41.660	
4,800.0	4,716.5	4,712.5	4,712.5	17.1	8.2	-161.81	-188.7	-175.2	744.2	726.5	17.70	42.042	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
4,900.0	4,814.3	4,810.3	4,810.3	17.5	8.4	-162.30	-188.7	-175.2	764.2	746.2	18.02	42.412	
5,000.0	4,912.0	4,908.0	4,908.0	17.9	8.6	-162.77	-188.7	-175.2	784.3	765.9	18.34	42.770	
5,100.0	5,009.8	5,005.8	5,005.8	18.3	8.7	-163.21	-188.7	-175.2	804.4	785.7	18.66	43.116	
5,200.0	5,107.6	5,103.6	5,103.6	18.7	8.9	-163.63	-188.7	-175.2	824.6	805.6	18.98	43.451	
5,300.0	5,205.3	5,201.3	5,201.3	19.2	9.1	-164.03	-188.7	-175.2	844.8	825.5	19.30	43.775	
5,400.0	5,303.1	5,299.1	5,299.1	19.6	9.2	-164.42	-188.7	-175.2	865.0	845.4	19.62	44.088	
5,500.0	5,400.9	5,396.9	5,396.9	20.0	9.4	-164.78	-188.7	-175.2	885.3	865.4	19.94	44.392	
5,600.0	5,498.6	5,494.6	5,494.6	20.4	9.6	-165.13	-188.7	-175.2	905.6	885.4	20.27	44.686	
5,700.0	5,596.4	5,592.4	5,592.4	20.8	9.8	-165.46	-188.7	-175.2	926.0	905.4	20.59	44.971	
5,800.0	5,694.2	5,690.2	5,690.2	21.2	9.9	-165.78	-188.7	-175.2	946.4	925.4	20.92	45.247	
5,900.0	5,791.9	5,787.9	5,787.9	21.6	10.1	-166.09	-188.7	-175.2	966.8	945.5	21.24	45.514	
6,000.0	5,889.7	5,885.7	5,885.7	22.0	10.3	-166.38	-188.7	-175.2	987.2	965.6	21.57	45.773	
6,100.0	5,987.5	5,983.5	5,983.5	22.4	10.4	-166.66	-188.7	-175.2	1,007.6	985.8	21.89	46.025	
6,200.0	6,085.3	6,081.3	6,081.3	22.9	10.6	-166.93	-188.7	-175.2	1,028.1	1,005.9	22.22	46.268	
6,300.0	6,183.0	6,179.0	6,179.0	23.3	10.8	-167.19	-188.7	-175.2	1,048.6	1,026.1	22.55	46.505	
6,400.0	6,280.8	6,276.8	6,276.8	23.7	11.0	-167.44	-188.7	-175.2	1,069.1	1,046.3	22.88	46.735	
6,500.0	6,378.6	6,374.6	6,374.6	24.1	11.1	-167.68	-188.7	-175.2	1,089.7	1,066.5	23.21	46.958	
6,600.0	6,476.3	6,472.3	6,472.3	24.5	11.3	-167.91	-188.7	-175.2	1,110.2	1,086.7	23.53	47.175	
6,700.0	6,574.1	6,570.1	6,570.1	24.9	11.5	-168.13	-188.7	-175.2	1,130.8	1,106.9	23.86	47.385	
6,800.0	6,671.9	6,667.9	6,667.9	25.3	11.6	-168.35	-188.7	-175.2	1,151.4	1,127.2	24.19	47.590	
6,900.0	6,769.6	6,765.6	6,765.6	25.7	11.8	-168.55	-188.7	-175.2	1,172.0	1,147.5	24.52	47.789	
7,000.0	6,867.4	6,863.4	6,863.4	26.2	12.0	-168.75	-188.7	-175.2	1,192.6	1,167.7	24.86	47.982	
7,100.0	6,965.2	6,961.2	6,961.2	26.6	12.1	-168.95	-188.7	-175.2	1,213.2	1,188.0	25.19	48.170	
7,167.0	7,030.7	7,026.7	7,026.7	26.8	12.3	-169.07	-188.7	-175.2	1,227.1	1,201.6	25.41	48.294	
7,200.0	7,063.0	7,059.0	7,059.0	27.0	12.3	-156.30	-188.7	-175.2	1,233.5	1,207.9	25.62	48.148	
7,250.0	7,111.9	7,107.9	7,107.9	27.2	12.4	-137.15	-188.7	-175.2	1,242.1	1,216.2	25.91	47.948	
7,300.0	7,160.6	7,156.6	7,156.6	27.3	12.5	-121.28	-188.7	-175.2	1,249.3	1,223.1	26.14	47.786	
7,350.0	7,208.9	7,204.9	7,204.9	27.5	12.6	-109.74	-188.7	-175.2	1,254.9	1,228.6	26.33	47.661	
7,400.0	7,256.5	7,252.5	7,252.5	27.6	12.7	-101.78	-188.7	-175.2	1,259.2	1,232.7	26.47	47.566	
7,450.0	7,303.1	7,299.1	7,299.1	27.8	12.7	-96.37	-188.7	-175.2	1,262.1	1,235.5	26.58	47.488	
7,500.0	7,348.7	7,344.7	7,344.7	27.9	12.8	-92.73	-188.7	-175.2	1,263.8	1,237.2	26.66	47.413	
7,550.0	7,392.8	7,388.8	7,388.8	28.0	12.9	-90.33	-188.7	-175.2	1,264.5	1,237.8	26.72	47.326	
7,600.0	7,435.4	7,431.4	7,431.4	28.1	13.0	-88.82	-188.7	-175.2	1,264.2	1,237.4	26.78	47.212	
7,650.0	7,476.2	7,472.2	7,472.2	28.2	13.0	-87.97	-188.7	-175.2	1,263.2	1,236.3	26.84	47.061	
7,700.0	7,515.1	7,511.1	7,511.1	28.3	13.1	-87.61	-188.7	-175.2	1,261.6	1,234.7	26.92	46.867	
7,750.0	7,551.7	7,547.7	7,547.7	28.4	13.2	-87.60	-188.7	-175.2	1,259.6	1,232.6	27.01	46.630	
7,800.0	7,586.0	7,582.0	7,582.0	28.5	13.2	-87.84	-188.7	-175.2	1,257.5	1,230.4	27.13	46.355	
7,850.0	7,617.8	7,613.8	7,613.8	28.6	13.3	-88.25	-188.7	-175.2	1,255.4	1,228.2	27.26	46.048	
7,900.0	7,646.9	7,642.9	7,642.9	28.7	13.3	-88.75	-188.7	-175.2	1,253.6	1,226.2	27.42	45.720	
7,950.0	7,673.1	7,669.1	7,669.1	28.8	13.4	-89.29	-188.7	-175.2	1,252.2	1,224.6	27.59	45.380	
8,000.0	7,696.5	7,692.5	7,692.5	29.0	13.4	-89.80	-188.7	-175.2	1,251.5	1,223.7	27.79	45.035	
8,020.7	7,705.2	7,701.2	7,701.2	29.0	13.4	-90.00	-188.7	-175.2	1,251.4	1,223.5	27.88	44.889	
8,050.0	7,716.7	7,712.7	7,712.7	29.1	13.5	-90.25	-188.7	-175.2	1,251.6	1,223.6	28.00	44.692	
8,100.0	7,733.9	7,729.9	7,729.9	29.3	13.5	-90.59	-188.7	-175.2	1,252.6	1,224.4	28.24	44.354	
8,150.0	7,747.7	7,743.7	7,743.7	29.4	13.5	-90.79	-188.7	-175.2	1,254.8	1,226.3	28.50	44.027	
8,200.0	7,758.3	7,754.3	7,754.3	29.6	13.5	-90.82	-188.7	-175.2	1,258.1	1,229.3	28.78	43.718	
8,250.0	7,765.5	7,761.5	7,761.5	29.8	13.5	-90.66	-188.7	-175.2	1,262.6	1,233.6	29.07	43.438	
8,300.0	7,769.3	7,765.3	7,765.3	30.0	13.6	-90.31	-188.7	-175.2	1,268.4	1,239.1	29.36	43.199	
8,330.9	7,770.0	7,766.0	7,766.0	30.2	13.6	-90.00	-188.7	-175.2	1,272.7	1,243.1	29.54	43.080	
8,400.0	7,770.0	7,766.0	7,766.0	30.5	13.6	-90.00	-188.7	-175.2	1,284.5	1,254.2	30.20	42.526	
8,500.0	7,770.0	7,766.0	7,766.0	31.1	13.6	-90.00	-188.7	-175.2	1,307.8	1,276.5	31.27	41.829	
8,600.0	7,770.0	7,766.0	7,766.0	31.8	13.6	-90.00	-188.7	-175.2	1,338.2	1,305.8	32.43	41.264	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,700.0	7,770.0	7,766.0	7,766.0	32.5	13.6	-90.00	-188.7	-175.2	1,375.3	1,341.6	33.68	40.832	
8,800.0	7,770.0	7,766.0	7,766.0	33.3	13.6	-90.00	-188.7	-175.2	1,418.4	1,383.4	35.00	40.523	
8,900.0	7,770.0	7,766.0	7,766.0	34.2	13.6	-90.00	-188.7	-175.2	1,467.1	1,430.7	36.38	40.325	
9,000.0	7,770.0	7,766.0	7,766.0	35.2	13.6	-90.00	-188.7	-175.2	1,520.8	1,483.0	37.81	40.222	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,600.0	7,770.0	7,774.0	7,774.0	31.8	13.6	-90.00	-1,635.6	-293.9	1,513.2	1,480.8	32.44	46.640	
8,700.0	7,770.0	7,774.0	7,774.0	32.5	13.6	-90.00	-1,635.6	-293.9	1,449.5	1,415.8	33.70	43.017	
8,800.0	7,770.0	7,774.0	7,774.0	33.3	13.6	-90.00	-1,635.6	-293.9	1,390.0	1,355.0	35.02	39.695	
8,900.0	7,770.0	7,774.0	7,774.0	34.2	13.6	-90.00	-1,635.6	-293.9	1,335.4	1,299.0	36.40	36.690	
9,000.0	7,770.0	7,774.0	7,774.0	35.2	13.6	-90.00	-1,635.6	-293.9	1,286.2	1,248.4	37.82	34.005	
9,100.0	7,770.0	7,774.0	7,774.0	36.2	13.6	-90.00	-1,635.6	-293.9	1,243.2	1,203.9	39.29	31.639	
9,200.0	7,770.0	7,774.0	7,774.0	37.3	13.6	-90.00	-1,635.6	-293.9	1,206.9	1,166.1	40.80	29.585	
9,300.0	7,770.0	7,774.0	7,774.0	38.4	13.6	-90.00	-1,635.6	-293.9	1,178.0	1,135.7	42.33	27.832	
9,400.0	7,770.0	7,774.0	7,774.0	39.6	13.6	-90.00	-1,635.6	-293.9	1,157.1	1,113.2	43.88	26.369	
9,500.0	7,770.0	7,774.0	7,774.0	40.8	13.6	-90.00	-1,635.6	-293.9	1,144.6	1,099.1	45.46	25.179	
9,594.3	7,770.0	7,774.0	7,774.0	42.0	13.6	-90.00	-1,635.6	-293.9	1,140.7	1,093.7	46.96	24.291	CC
9,600.0	7,770.0	7,774.0	7,774.0	42.0	13.6	-90.00	-1,635.6	-293.9	1,140.7	1,093.7	47.05	24.244	ES
9,700.0	7,770.0	7,774.0	7,774.0	43.3	13.6	-90.00	-1,635.6	-293.9	1,145.6	1,096.9	48.66	23.543	
9,800.0	7,770.0	7,774.0	7,774.0	44.6	13.6	-90.00	-1,635.6	-293.9	1,159.1	1,108.8	50.28	23.052	
9,900.0	7,770.0	7,774.0	7,774.0	46.0	13.6	-90.00	-1,635.6	-293.9	1,180.9	1,129.0	51.91	22.748	
10,000.0	7,770.0	7,774.0	7,774.0	47.4	13.6	-90.00	-1,635.6	-293.9	1,210.7	1,157.1	53.56	22.605	
10,100.0	7,770.0	7,774.0	7,774.0	48.7	13.6	-90.00	-1,635.6	-293.9	1,247.8	1,192.5	55.21	22.600	SF
10,200.0	7,770.0	7,774.0	7,774.0	50.2	13.6	-90.00	-1,635.6	-293.9	1,291.5	1,234.7	56.87	22.709	
10,300.0	7,770.0	7,774.0	7,774.0	51.6	13.6	-90.00	-1,635.6	-293.9	1,341.3	1,282.8	58.54	22.913	
10,400.0	7,770.0	7,774.0	7,774.0	53.1	13.6	-90.00	-1,635.6	-293.9	1,396.5	1,336.3	60.21	23.193	
10,500.0	7,770.0	7,774.0	7,774.0	54.6	13.6	-90.00	-1,635.6	-293.9	1,456.5	1,394.6	61.89	23.532	
10,600.0	7,770.0	7,774.0	7,774.0	56.1	13.6	-90.00	-1,635.6	-293.9	1,520.7	1,457.1	63.58	23.919	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
1,800.0	1,783.4	1,803.4	1,803.4	4.8	3.1	-64.76	-1,116.8	-1,197.8	1,541.6	1,533.9	7.71	200.006	
1,900.0	1,881.2	1,901.2	1,901.2	5.2	3.3	-65.46	-1,116.8	-1,197.8	1,532.6	1,524.3	8.26	185.510	
2,000.0	1,979.0	1,999.0	1,999.0	5.6	3.5	-66.16	-1,116.8	-1,197.8	1,523.8	1,515.0	8.82	172.763	
2,100.0	2,076.7	2,096.7	2,096.7	6.0	3.7	-66.87	-1,116.8	-1,197.8	1,515.3	1,505.9	9.38	161.481	
2,200.0	2,174.5	2,194.5	2,194.5	6.4	3.8	-67.59	-1,116.8	-1,197.8	1,507.0	1,497.1	9.95	151.437	
2,300.0	2,272.3	2,292.3	2,292.3	6.8	4.0	-68.32	-1,116.8	-1,197.8	1,499.0	1,488.5	10.52	142.448	
2,400.0	2,370.0	2,390.0	2,390.0	7.3	4.2	-69.06	-1,116.8	-1,197.8	1,491.2	1,480.1	11.10	134.364	
2,500.0	2,467.8	2,487.8	2,487.8	7.7	4.3	-69.80	-1,116.8	-1,197.8	1,483.7	1,472.0	11.68	127.062	
2,600.0	2,565.6	2,585.6	2,585.6	8.1	4.5	-70.55	-1,116.8	-1,197.8	1,476.4	1,464.1	12.26	120.440	
2,700.0	2,663.4	2,683.4	2,683.4	8.5	4.7	-71.31	-1,116.8	-1,197.8	1,469.4	1,456.6	12.84	114.413	
2,800.0	2,761.1	2,781.1	2,781.1	8.9	4.9	-72.07	-1,116.8	-1,197.8	1,462.7	1,449.2	13.43	108.910	
2,900.0	2,858.9	2,878.9	2,878.9	9.3	5.0	-72.84	-1,116.8	-1,197.8	1,456.2	1,442.2	14.02	103.869	
3,000.0	2,956.7	2,976.7	2,976.7	9.7	5.2	-73.62	-1,116.8	-1,197.8	1,450.0	1,435.4	14.61	99.240	
3,100.0	3,054.4	3,074.4	3,074.4	10.1	5.4	-74.40	-1,116.8	-1,197.8	1,444.1	1,428.9	15.20	94.977	
3,200.0	3,152.2	3,172.2	3,172.2	10.5	5.5	-75.19	-1,116.8	-1,197.8	1,438.5	1,422.7	15.80	91.042	
3,300.0	3,250.0	3,270.0	3,270.0	10.9	5.7	-75.99	-1,116.8	-1,197.8	1,433.1	1,416.7	16.40	87.403	
3,400.0	3,347.7	3,367.7	3,367.7	11.3	5.9	-76.79	-1,116.8	-1,197.8	1,428.1	1,411.1	16.99	84.030	
3,500.0	3,445.5	3,465.5	3,465.5	11.7	6.0	-77.59	-1,116.8	-1,197.8	1,423.3	1,405.7	17.59	80.899	
3,600.0	3,543.3	3,563.3	3,563.3	12.2	6.2	-78.40	-1,116.8	-1,197.8	1,418.9	1,400.7	18.19	77.987	
3,700.0	3,641.0	3,661.0	3,661.0	12.6	6.4	-79.22	-1,116.8	-1,197.8	1,414.7	1,395.9	18.79	75.274	
3,800.0	3,738.8	3,758.8	3,758.8	13.0	6.6	-80.04	-1,116.8	-1,197.8	1,410.8	1,391.4	19.39	72.745	
3,900.0	3,836.6	3,856.6	3,856.6	13.4	6.7	-80.86	-1,116.8	-1,197.8	1,407.3	1,387.3	19.99	70.382	
4,000.0	3,934.3	3,954.3	3,954.3	13.8	6.9	-81.69	-1,116.8	-1,197.8	1,404.0	1,383.4	20.59	68.173	
4,100.0	4,032.1	4,052.1	4,052.1	14.2	7.1	-82.52	-1,116.8	-1,197.8	1,401.1	1,379.9	21.19	66.105	
4,200.0	4,129.9	4,149.9	4,149.9	14.6	7.2	-83.36	-1,116.8	-1,197.8	1,398.4	1,376.6	21.79	64.167	
4,300.0	4,227.7	4,247.7	4,247.7	15.0	7.4	-84.19	-1,116.8	-1,197.8	1,396.1	1,373.7	22.39	62.350	
4,400.0	4,325.4	4,345.4	4,345.4	15.4	7.6	-85.03	-1,116.8	-1,197.8	1,394.1	1,371.1	22.99	60.644	
4,500.0	4,423.2	4,443.2	4,443.2	15.9	7.8	-85.88	-1,116.8	-1,197.8	1,392.4	1,368.8	23.58	59.042	
4,600.0	4,521.0	4,541.0	4,541.0	16.3	7.9	-86.72	-1,116.8	-1,197.8	1,391.0	1,366.8	24.18	57.535	
4,700.0	4,618.7	4,638.7	4,638.7	16.7	8.1	-87.57	-1,116.8	-1,197.8	1,389.9	1,365.1	24.77	56.119	
4,800.0	4,716.5	4,736.5	4,736.5	17.1	8.3	-88.41	-1,116.8	-1,197.8	1,389.2	1,363.8	25.36	54.786	
4,900.0	4,814.3	4,834.3	4,834.3	17.5	8.4	-89.26	-1,116.8	-1,197.8	1,388.7	1,362.8	25.94	53.531	
4,987.4	4,899.7	4,919.7	4,919.7	17.9	8.6	-90.00	-1,116.8	-1,197.8	1,388.6	1,362.1	26.45	52.494	
5,000.0	4,912.0	4,932.0	4,932.0	17.9	8.6	-90.11	-1,116.8	-1,197.8	1,388.6	1,362.1	26.53	52.349	
5,100.0	5,009.8	5,029.8	5,029.8	18.3	8.8	-90.95	-1,116.8	-1,197.8	1,388.8	1,361.7	27.11	51.235	
5,200.0	5,107.6	5,127.6	5,127.6	18.7	8.9	-91.80	-1,116.8	-1,197.8	1,389.3	1,361.6	27.68	50.186	
5,300.0	5,205.3	5,225.3	5,225.3	19.2	9.1	-92.65	-1,116.8	-1,197.8	1,390.2	1,361.9	28.26	49.196	
5,400.0	5,303.1	5,323.1	5,323.1	19.6	9.3	-93.49	-1,116.8	-1,197.8	1,391.3	1,362.5	28.83	48.263	
5,500.0	5,400.9	5,420.9	5,420.9	20.0	9.5	-94.34	-1,116.8	-1,197.8	1,392.8	1,363.4	29.39	47.383	
5,600.0	5,498.6	5,518.6	5,518.6	20.4	9.6	-95.18	-1,116.8	-1,197.8	1,394.6	1,364.6	29.96	46.553	
5,700.0	5,596.4	5,616.4	5,616.4	20.8	9.8	-96.02	-1,116.8	-1,197.8	1,396.6	1,366.1	30.51	45.771	
5,800.0	5,694.2	5,714.2	5,714.2	21.2	10.0	-96.85	-1,116.8	-1,197.8	1,399.1	1,368.0	31.07	45.033	
5,900.0	5,791.9	5,811.9	5,811.9	21.6	10.1	-97.69	-1,116.8	-1,197.8	1,401.8	1,370.2	31.62	44.337	
6,000.0	5,889.7	5,909.7	5,909.7	22.0	10.3	-98.52	-1,116.8	-1,197.8	1,404.8	1,372.6	32.16	43.680	
6,100.0	5,987.5	6,007.5	6,007.5	22.4	10.5	-99.35	-1,116.8	-1,197.8	1,408.1	1,375.4	32.70	43.062	
6,200.0	6,085.3	6,105.3	6,105.3	22.9	10.7	-100.17	-1,116.8	-1,197.8	1,411.8	1,378.5	33.23	42.479	
6,300.0	6,183.0	6,203.0	6,203.0	23.3	10.8	-100.99	-1,116.8	-1,197.8	1,415.7	1,382.0	33.76	41.929	
6,400.0	6,280.8	6,300.8	6,300.8	23.7	11.0	-101.80	-1,116.8	-1,197.8	1,420.0	1,385.7	34.29	41.412	
6,500.0	6,378.6	6,398.6	6,398.6	24.1	11.2	-102.61	-1,116.8	-1,197.8	1,424.5	1,389.7	34.81	40.925	
6,600.0	6,476.3	6,496.3	6,496.3	24.5	11.3	-103.42	-1,116.8	-1,197.8	1,429.3	1,394.0	35.32	40.467	
6,700.0	6,574.1	6,594.1	6,594.1	24.9	11.5	-104.21	-1,116.8	-1,197.8	1,434.5	1,398.6	35.83	40.036	
6,800.0	6,671.9	6,691.9	6,691.9	25.3	11.7	-105.01	-1,116.8	-1,197.8	1,439.9	1,403.5	36.33	39.630	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
6,900.0	6,769.6	6,789.6	6,789.6	25.7	11.9	-105.80	-1,116.8	-1,197.8	1,445.6	1,408.7	36.83	39.250	
7,000.0	6,867.4	6,887.4	6,887.4	26.2	12.0	-106.58	-1,116.8	-1,197.8	1,451.5	1,414.2	37.32	38.893	
7,100.0	6,965.2	6,985.2	6,985.2	26.6	12.2	-107.35	-1,116.8	-1,197.8	1,457.8	1,420.0	37.81	38.558	
7,167.0	7,030.7	7,050.7	7,050.7	26.8	12.3	-107.87	-1,116.8	-1,197.8	1,462.1	1,424.0	38.13	38.346	
7,200.0	7,063.0	7,083.0	7,083.0	27.0	12.4	-95.73	-1,116.8	-1,197.8	1,463.6	1,425.3	38.28	38.231	
7,250.0	7,111.9	7,131.9	7,131.9	27.2	12.4	-77.34	-1,116.8	-1,197.8	1,462.9	1,424.5	38.38	38.112	
7,300.0	7,160.6	7,180.6	7,180.6	27.3	12.5	-62.01	-1,116.8	-1,197.8	1,458.8	1,420.5	38.33	38.058	
7,350.0	7,208.9	7,228.9	7,228.9	27.5	12.6	-50.82	-1,116.8	-1,197.8	1,451.4	1,413.2	38.13	38.068	
7,400.0	7,256.5	7,276.5	7,276.5	27.6	12.7	-43.03	-1,116.8	-1,197.8	1,440.6	1,402.8	37.77	38.142	
7,450.0	7,303.1	7,323.1	7,323.1	27.8	12.8	-37.64	-1,116.8	-1,197.8	1,426.5	1,389.2	37.26	38.281	
7,500.0	7,348.7	7,368.7	7,368.7	27.9	12.9	-33.90	-1,116.8	-1,197.8	1,409.2	1,372.6	36.62	38.483	
7,550.0	7,392.8	7,412.8	7,412.8	28.0	12.9	-31.32	-1,116.8	-1,197.8	1,388.8	1,353.0	35.84	38.749	
7,600.0	7,435.4	7,455.4	7,455.4	28.1	13.0	-29.60	-1,116.8	-1,197.8	1,365.4	1,330.5	34.94	39.078	
7,650.0	7,476.2	7,496.2	7,496.2	28.2	13.1	-28.54	-1,116.8	-1,197.8	1,339.1	1,305.2	33.93	39.465	
7,700.0	7,515.1	7,535.1	7,535.1	28.3	13.2	-28.03	-1,116.8	-1,197.8	1,310.0	1,277.2	32.83	39.904	
7,750.0	7,551.7	7,571.7	7,571.7	28.4	13.2	-28.01	-1,116.8	-1,197.8	1,278.3	1,246.7	31.66	40.379	
7,800.0	7,586.0	7,606.0	7,606.0	28.5	13.3	-28.47	-1,116.8	-1,197.8	1,244.2	1,213.7	30.45	40.865	
7,850.0	7,617.8	7,637.8	7,637.8	28.6	13.3	-29.41	-1,116.8	-1,197.8	1,207.8	1,178.5	29.23	41.320	
7,900.0	7,646.9	7,666.9	7,666.9	28.7	13.4	-30.90	-1,116.8	-1,197.8	1,169.2	1,141.2	28.06	41.674	
7,950.0	7,673.1	7,693.1	7,693.1	28.8	13.4	-33.02	-1,116.8	-1,197.8	1,128.8	1,101.8	26.99	41.820	
8,000.0	7,696.5	7,716.5	7,716.5	29.0	13.5	-35.91	-1,116.8	-1,197.8	1,086.7	1,060.6	26.12	41.604	
8,050.0	7,716.7	7,736.7	7,736.7	29.1	13.5	-39.77	-1,116.8	-1,197.8	1,043.1	1,017.5	25.55	40.830	
8,100.0	7,733.9	7,753.9	7,753.9	29.3	13.5	-44.86	-1,116.8	-1,197.8	998.2	972.8	25.39	39.309	
8,150.0	7,747.7	7,767.7	7,767.7	29.4	13.6	-51.52	-1,116.8	-1,197.8	952.3	926.6	25.77	36.961	
8,200.0	7,758.3	7,778.3	7,778.3	29.6	13.6	-60.02	-1,116.8	-1,197.8	905.6	879.0	26.67	33.956	
8,250.0	7,765.5	7,785.5	7,785.5	29.8	13.6	-70.45	-1,116.8	-1,197.8	858.4	830.5	27.92	30.747	
8,300.0	7,769.3	7,789.3	7,789.3	30.0	13.6	-82.35	-1,116.8	-1,197.8	810.8	781.7	29.09	27.875	
8,330.9	7,770.0	7,790.0	7,790.0	30.2	13.6	-90.00	-1,116.8	-1,197.8	781.4	751.8	29.58	26.411	
8,400.0	7,770.0	7,790.0	7,790.0	30.5	13.6	-90.00	-1,116.8	-1,197.8	715.8	685.6	30.25	23.666	
8,500.0	7,770.0	7,790.0	7,790.0	31.1	13.6	-90.00	-1,116.8	-1,197.8	622.3	591.0	31.31	19.878	
8,600.0	7,770.0	7,790.0	7,790.0	31.8	13.6	-90.00	-1,116.8	-1,197.8	531.2	498.7	32.47	16.358	
8,700.0	7,770.0	7,790.0	7,790.0	32.5	13.6	-90.00	-1,116.8	-1,197.8	443.9	410.2	33.72	13.164	
8,800.0	7,770.0	7,790.0	7,790.0	33.3	13.6	-90.00	-1,116.8	-1,197.8	363.3	328.2	35.04	10.366	
8,900.0	7,770.0	7,790.0	7,790.0	34.2	13.6	-90.00	-1,116.8	-1,197.8	294.7	258.3	36.42	8.091	
9,000.0	7,770.0	7,790.0	7,790.0	35.2	13.6	-90.00	-1,116.8	-1,197.8	248.5	210.6	37.85	6.564	
9,075.5	7,770.0	7,790.0	7,790.0	35.9	13.6	-90.00	-1,116.8	-1,197.8	236.7	197.8	38.96	6.076	CC, ES
9,100.0	7,770.0	7,790.0	7,790.0	36.2	13.6	-90.00	-1,116.8	-1,197.8	238.0	198.7	39.32	6.052	SF
9,200.0	7,770.0	7,790.0	7,790.0	37.3	13.6	-90.00	-1,116.8	-1,197.8	267.4	226.6	40.82	6.551	
9,300.0	7,770.0	7,790.0	7,790.0	38.4	13.6	-90.00	-1,116.8	-1,197.8	326.2	283.9	42.35	7.702	
9,400.0	7,770.0	7,790.0	7,790.0	39.6	13.6	-90.00	-1,116.8	-1,197.8	401.6	357.7	43.91	9.147	
9,500.0	7,770.0	7,790.0	7,790.0	40.8	13.6	-90.00	-1,116.8	-1,197.8	486.0	440.5	45.48	10.685	
9,600.0	7,770.0	7,790.0	7,790.0	42.0	13.6	-90.00	-1,116.8	-1,197.8	575.4	528.3	47.08	12.222	
9,700.0	7,770.0	7,790.0	7,790.0	43.3	13.6	-90.00	-1,116.8	-1,197.8	667.8	619.1	48.69	13.717	
9,800.0	7,770.0	7,790.0	7,790.0	44.6	13.6	-90.00	-1,116.8	-1,197.8	762.2	711.8	50.31	15.149	
9,900.0	7,770.0	7,790.0	7,790.0	46.0	13.6	-90.00	-1,116.8	-1,197.8	857.8	805.8	51.94	16.514	
10,000.0	7,770.0	7,790.0	7,790.0	47.4	13.6	-90.00	-1,116.8	-1,197.8	954.3	900.7	53.59	17.808	
10,100.0	7,770.0	7,790.0	7,790.0	48.7	13.6	-90.00	-1,116.8	-1,197.8	1,051.5	996.2	55.24	19.034	
10,200.0	7,770.0	7,790.0	7,790.0	50.2	13.6	-90.00	-1,116.8	-1,197.8	1,149.1	1,092.2	56.90	20.195	
10,300.0	7,770.0	7,790.0	7,790.0	51.6	13.6	-90.00	-1,116.8	-1,197.8	1,247.1	1,188.6	58.57	21.294	
10,400.0	7,770.0	7,790.0	7,790.0	53.1	13.6	-90.00	-1,116.8	-1,197.8	1,345.4	1,285.2	60.24	22.334	
10,500.0	7,770.0	7,790.0	7,790.0	54.6	13.6	-90.00	-1,116.8	-1,197.8	1,444.0	1,382.1	61.92	23.319	
10,600.0	7,770.0	7,790.0	7,790.0	56.1	13.6	-90.00	-1,116.8	-1,197.8	1,542.7	1,479.1	63.61	24.254	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 2F-7H-E168 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,167.0	7,030.7	9,477.4	7,550.0	26.8	48.8	-16.05	355.7	-2,723.5	1,537.9	1,481.5	56.32	27.307	
7,200.0	7,063.0	9,478.3	7,550.0	27.0	48.8	-2.00	356.7	-2,723.4	1,520.6	1,463.9	56.69	26.826	
7,250.0	7,111.9	9,476.9	7,550.0	27.2	48.8	19.04	355.3	-2,723.5	1,495.5	1,438.4	57.16	26.165	
7,300.0	7,160.6	9,472.0	7,550.0	27.3	48.7	36.73	350.4	-2,723.5	1,471.8	1,414.3	57.53	25.584	
7,350.0	7,208.9	9,463.6	7,550.0	27.5	48.6	49.99	342.0	-2,723.6	1,449.7	1,391.9	57.80	25.082	
7,400.0	7,256.5	9,451.9	7,550.0	27.6	48.4	59.57	330.2	-2,723.7	1,429.2	1,371.3	57.95	24.662	
7,450.0	7,303.1	9,436.7	7,550.0	27.8	48.2	66.50	315.1	-2,723.8	1,410.5	1,352.6	57.99	24.325	
7,500.0	7,348.7	9,418.3	7,550.0	27.9	47.9	71.55	296.7	-2,724.0	1,393.7	1,335.8	57.90	24.072	
7,550.0	7,392.8	9,396.7	7,550.0	28.0	47.6	75.25	275.1	-2,724.2	1,378.6	1,320.9	57.68	23.903	
7,600.0	7,435.4	9,372.0	7,550.0	28.1	47.2	77.94	250.3	-2,724.4	1,365.4	1,308.1	57.33	23.815	
7,650.0	7,476.2	9,344.3	7,550.0	28.2	46.8	79.88	222.7	-2,724.6	1,354.0	1,297.1	56.88	23.805 SF	
7,700.0	7,515.1	9,313.7	7,550.0	28.3	46.4	81.22	192.1	-2,724.9	1,344.2	1,287.9	56.31	23.870	
7,750.0	7,551.7	9,280.5	7,550.0	28.4	45.9	82.10	158.9	-2,725.2	1,336.1	1,280.4	55.66	24.004	
7,800.0	7,586.0	9,244.8	7,550.0	28.5	45.3	82.62	123.2	-2,725.5	1,329.4	1,274.5	54.93	24.200	
7,850.0	7,617.8	9,206.7	7,550.0	28.6	44.8	82.85	85.1	-2,725.9	1,324.0	1,269.9	54.15	24.450	
7,900.0	7,646.9	9,166.5	7,550.0	28.7	44.2	82.87	44.9	-2,726.2	1,319.9	1,266.5	53.34	24.747	
7,950.0	7,673.1	9,124.2	7,550.0	28.8	43.6	82.73	2.7	-2,726.6	1,316.7	1,264.2	52.50	25.079	
8,000.0	7,696.5	9,080.3	7,550.0	29.0	43.0	82.49	-41.3	-2,727.0	1,314.4	1,262.8	51.68	25.435	
8,050.0	7,716.7	9,034.7	7,550.0	29.1	42.3	82.20	-86.9	-2,727.4	1,312.8	1,262.0	50.88	25.805	
8,100.0	7,733.9	8,987.9	7,550.0	29.3	41.7	81.88	-133.7	-2,727.8	1,311.8	1,261.7	50.12	26.176 ES	
8,150.0	7,747.7	8,939.9	7,550.0	29.4	41.0	81.58	-181.7	-2,728.2	1,311.3	1,261.9	49.41	26.537	
8,200.0	7,758.3	8,891.1	7,550.0	29.6	40.3	81.32	-230.5	-2,728.7	1,311.1	1,262.3	48.77	26.883	
8,215.2	7,760.9	8,876.1	7,550.0	29.7	40.1	81.25	-245.5	-2,728.8	1,311.1	1,262.5	48.59	26.981 CC	
8,250.0	7,765.5	8,841.6	7,550.0	29.8	39.6	81.12	-280.0	-2,729.1	1,311.1	1,262.9	48.19	27.205	
8,300.0	7,769.3	8,791.8	7,550.0	30.0	39.0	81.00	-329.8	-2,729.5	1,311.4	1,263.7	47.68	27.505	
8,330.9	7,770.0	8,760.9	7,550.0	30.2	38.5	80.96	-360.7	-2,729.8	1,311.6	1,264.2	47.39	27.678	
8,400.0	7,770.0	8,691.8	7,550.0	30.5	37.6	80.97	-429.8	-2,730.4	1,312.2	1,265.3	46.93	27.960	
8,500.0	7,770.0	8,591.8	7,550.0	31.1	36.3	80.97	-529.8	-2,731.3	1,313.1	1,266.7	46.39	28.307	
8,600.0	7,770.0	8,491.8	7,550.0	31.8	35.1	80.98	-629.8	-2,732.2	1,314.0	1,268.0	45.97	28.586	
8,700.0	7,770.0	8,391.8	7,550.0	32.5	33.9	80.99	-729.8	-2,733.1	1,314.8	1,269.2	45.65	28.802	
8,800.0	7,770.0	8,291.8	7,550.0	33.3	32.7	80.99	-829.8	-2,734.0	1,315.7	1,270.3	45.43	28.960	
8,900.0	7,770.0	8,191.8	7,550.0	34.2	31.6	81.00	-929.7	-2,734.9	1,316.6	1,271.3	45.30	29.062	
9,000.0	7,770.0	8,091.8	7,550.0	35.2	30.6	81.00	-1,029.7	-2,735.8	1,317.5	1,272.2	45.26	29.107	
9,100.0	7,770.0	7,991.8	7,550.0	36.2	29.6	81.01	-1,129.7	-2,736.7	1,318.3	1,273.0	45.31	29.098	
9,200.0	7,770.0	7,933.5	7,547.5	37.3	29.1	80.91	-1,188.0	-2,737.6	1,320.7	1,274.7	45.98	28.721	
9,300.0	7,770.0	7,877.8	7,539.6	38.4	28.6	80.59	-1,243.0	-2,739.5	1,326.4	1,279.7	46.73	28.388	
9,400.0	7,770.0	7,824.3	7,527.2	39.6	28.1	80.07	-1,295.0	-2,742.3	1,335.6	1,288.1	47.52	28.107	
9,500.0	7,770.0	7,773.5	7,511.0	40.8	27.7	79.41	-1,343.0	-2,745.6	1,348.4	1,300.0	48.37	27.876	
9,600.0	7,770.0	7,726.0	7,492.1	42.0	27.3	78.65	-1,386.4	-2,749.4	1,365.1	1,315.8	49.29	27.695	
9,700.0	7,770.0	7,682.1	7,471.6	43.3	27.0	77.83	-1,425.0	-2,753.5	1,385.8	1,335.6	50.27	27.568	
9,800.0	7,770.0	7,650.0	7,454.8	44.6	26.7	77.17	-1,452.1	-2,756.8	1,410.8	1,359.4	51.41	27.442	
9,900.0	7,770.0	7,600.0	7,425.6	46.0	26.4	76.03	-1,492.4	-2,762.4	1,440.1	1,387.8	52.32	27.523	
10,000.0	7,770.0	7,571.9	7,407.8	47.4	26.2	75.34	-1,513.8	-2,765.8	1,473.7	1,420.2	53.53	27.528	
10,100.0	7,770.0	7,550.0	7,393.2	48.7	26.1	74.79	-1,529.9	-2,768.6	1,511.7	1,456.9	54.82	27.575	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 2G-7H-E168 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,000.0	6,867.4	9,836.9	7,803.0	26.2	51.1	-19.01	323.7	-2,435.8	1,521.3	1,466.5	54.89	27.717	
7,100.0	6,965.2	9,842.5	7,803.0	26.6	51.2	-18.68	329.3	-2,435.8	1,445.9	1,390.6	55.28	26.156	
7,167.0	7,030.7	9,846.3	7,803.0	26.8	51.3	-18.46	333.0	-2,435.8	1,397.1	1,341.5	55.54	25.154	
7,200.0	7,063.0	9,847.3	7,803.0	27.0	51.3	-3.33	334.1	-2,435.8	1,373.6	1,317.2	56.32	24.389	
7,250.0	7,111.9	9,846.1	7,803.0	27.2	51.3	19.28	332.9	-2,435.8	1,338.7	1,281.3	57.39	23.327	
7,300.0	7,160.6	9,841.4	7,803.0	27.3	51.2	38.41	328.2	-2,435.8	1,304.9	1,246.5	58.33	22.372	
7,350.0	7,208.9	9,833.2	7,803.0	27.5	51.1	52.98	320.0	-2,435.7	1,272.4	1,213.3	59.13	21.520	
7,400.0	7,256.5	9,821.6	7,803.0	27.6	50.9	63.74	308.4	-2,435.6	1,241.4	1,181.7	59.76	20.774	
7,450.0	7,303.1	9,806.6	7,803.0	27.8	50.7	71.71	293.4	-2,435.5	1,212.2	1,152.0	60.21	20.133	
7,500.0	7,348.7	9,788.3	7,803.0	27.9	50.5	77.68	275.1	-2,435.3	1,184.8	1,124.3	60.46	19.596	
7,550.0	7,392.8	9,766.9	7,803.0	28.0	50.2	82.19	253.7	-2,435.2	1,159.3	1,098.8	60.50	19.160	
7,600.0	7,435.4	9,742.3	7,803.0	28.1	49.8	85.60	229.1	-2,434.9	1,135.9	1,075.5	60.35	18.821	
7,650.0	7,476.2	9,714.8	7,803.0	28.2	49.4	88.17	201.6	-2,434.7	1,114.5	1,054.5	60.02	18.570	
7,700.0	7,515.1	9,684.4	7,803.0	28.3	49.0	90.06	171.2	-2,434.5	1,095.3	1,035.8	59.51	18.404	
7,750.0	7,551.7	9,651.3	7,803.0	28.4	48.6	91.43	138.1	-2,434.2	1,078.1	1,019.2	58.87	18.314	
7,800.0	7,586.0	9,615.7	7,803.0	28.5	48.1	92.37	102.5	-2,433.9	1,062.9	1,004.8	58.10	18.295	SF
7,850.0	7,617.8	9,577.7	7,803.0	28.6	47.6	92.96	64.5	-2,433.5	1,049.7	992.5	57.24	18.339	
7,900.0	7,646.9	9,537.6	7,803.0	28.7	47.0	93.30	24.4	-2,433.2	1,038.3	982.0	56.30	18.441	
7,950.0	7,673.1	9,495.5	7,803.0	28.8	46.5	93.43	-17.7	-2,432.8	1,028.5	973.2	55.32	18.593	
8,000.0	7,696.5	9,451.6	7,803.0	29.0	45.9	93.42	-61.6	-2,432.5	1,020.3	966.0	54.31	18.788	
8,050.0	7,716.7	9,406.1	7,803.0	29.1	45.3	93.31	-107.1	-2,432.1	1,013.6	960.3	53.28	19.023	
8,100.0	7,733.9	9,359.3	7,803.0	29.3	44.7	93.16	-153.9	-2,431.7	1,008.1	955.8	52.26	19.289	
8,150.0	7,747.7	9,311.4	7,803.0	29.4	44.1	92.99	-201.8	-2,431.3	1,003.7	952.5	51.25	19.584	
8,200.0	7,758.3	9,262.6	7,803.0	29.6	43.5	92.84	-250.6	-2,430.8	1,000.5	950.2	50.26	19.904	
8,250.0	7,765.5	9,213.2	7,803.0	29.8	42.9	92.74	-300.0	-2,430.4	998.1	948.9	49.29	20.249	
8,300.0	7,769.3	9,163.4	7,803.0	30.0	42.3	92.70	-349.8	-2,430.0	996.7	948.4	48.34	20.619	
8,330.9	7,770.0	9,132.5	7,803.0	30.2	41.9	92.70	-380.7	-2,429.7	996.3	948.6	47.76	20.862	
8,400.0	7,770.0	9,063.4	7,803.0	30.5	41.1	92.71	-449.8	-2,429.1	995.7	948.4	47.32	21.042	
8,500.0	7,770.0	8,963.4	7,803.0	31.1	39.9	92.71	-549.8	-2,428.3	994.9	948.0	46.81	21.253	
8,600.0	7,770.0	8,863.4	7,803.0	31.8	38.8	92.71	-649.8	-2,427.4	994.0	947.6	46.42	21.412	
8,700.0	7,770.0	8,763.4	7,803.0	32.5	37.8	92.71	-749.8	-2,426.6	993.1	947.0	46.15	21.521	
8,800.0	7,770.0	8,663.4	7,803.0	33.3	36.8	92.71	-849.8	-2,425.7	992.3	946.3	45.97	21.585	
8,900.0	7,770.0	8,563.4	7,803.0	34.2	35.8	92.72	-949.8	-2,424.8	991.4	945.5	45.89	21.605	
9,000.0	7,770.0	8,463.4	7,803.0	35.2	35.0	92.72	-1,049.8	-2,424.0	990.6	944.7	45.90	21.582	
9,100.0	7,770.0	8,363.4	7,803.0	36.2	34.1	92.72	-1,149.8	-2,423.1	989.7	943.7	46.00	21.516	
9,200.0	7,770.0	8,271.5	7,802.1	37.3	33.5	92.67	-1,241.6	-2,422.5	989.0	942.7	46.29	21.364	
9,201.6	7,770.0	8,270.2	7,802.1	37.3	33.4	92.67	-1,242.9	-2,422.5	989.0	942.7	46.30	21.360	CC, ES
9,300.0	7,770.0	8,193.2	7,792.7	38.4	32.9	92.12	-1,319.3	-2,423.7	990.1	943.2	46.86	21.128	
9,400.0	7,770.0	8,118.8	7,774.2	39.6	32.4	91.05	-1,391.3	-2,426.8	993.7	946.1	47.56	20.891	
9,500.0	7,770.0	8,050.0	7,749.1	40.8	32.0	89.60	-1,455.1	-2,431.2	1,000.4	952.0	48.39	20.674	
9,600.0	7,770.0	7,988.6	7,720.5	42.0	31.6	87.97	-1,509.2	-2,436.5	1,011.2	961.9	49.35	20.492	
9,700.0	7,770.0	7,934.1	7,690.4	43.3	31.3	86.28	-1,554.3	-2,442.1	1,026.8	976.4	50.39	20.376	
9,800.0	7,770.0	7,886.3	7,660.8	44.6	31.0	84.63	-1,591.3	-2,447.6	1,047.8	996.3	51.51	20.341	
9,900.0	7,770.0	7,850.0	7,636.3	46.0	30.8	83.29	-1,617.7	-2,452.3	1,074.6	1,021.9	52.74	20.375	
10,000.0	7,770.0	7,800.0	7,600.0	47.4	30.6	81.34	-1,651.3	-2,459.2	1,107.4	1,053.6	53.81	20.579	
10,100.0	7,770.0	7,776.9	7,582.3	48.7	30.5	80.41	-1,665.7	-2,462.6	1,146.0	1,090.8	55.18	20.769	
10,200.0	7,770.0	7,750.0	7,560.9	50.2	30.3	79.30	-1,681.6	-2,466.7	1,190.3	1,133.8	56.48	21.075	
10,300.0	7,770.0	7,725.1	7,540.5	51.6	30.2	78.25	-1,695.4	-2,470.7	1,239.8	1,182.0	57.80	21.452	
10,400.0	7,770.0	7,700.0	7,519.4	53.1	30.1	77.19	-1,708.3	-2,474.8	1,294.3	1,235.2	59.09	21.906	
10,500.0	7,770.0	7,700.0	7,519.4	54.6	30.1	77.19	-1,708.3	-2,474.8	1,353.5	1,292.8	60.72	22.290	
10,600.0	7,770.0	7,667.9	7,491.6	56.1	29.9	75.81	-1,723.5	-2,480.2	1,416.2	1,354.3	61.89	22.881	
10,700.0	7,770.0	7,650.0	7,475.8	57.6	29.9	75.04	-1,731.2	-2,483.2	1,482.7	1,419.5	63.25	23.443	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
6,500.0	6,378.6	9,735.9	7,550.0	24.1	53.1	-27.79	212.2	-2,129.0	1,543.0	1,494.8	48.25	31.979	
6,600.0	6,476.3	9,743.2	7,550.0	24.5	53.1	-27.23	219.5	-2,129.7	1,456.1	1,407.3	48.83	29.820	
6,700.0	6,574.1	9,750.6	7,550.0	24.9	53.2	-26.66	226.8	-2,130.4	1,370.9	1,321.5	49.41	27.748	
6,800.0	6,671.9	9,757.9	7,550.0	25.3	53.3	-26.10	234.1	-2,131.1	1,287.8	1,237.8	49.98	25.768	
6,900.0	6,769.6	9,765.3	7,550.0	25.7	53.4	-25.53	241.4	-2,131.8	1,207.2	1,156.7	50.54	23.884	
7,000.0	6,867.4	9,772.6	7,550.0	26.2	53.5	-24.97	248.8	-2,132.5	1,129.7	1,078.6	51.11	22.104	
7,100.0	6,965.2	9,780.0	7,550.0	26.6	53.6	-24.40	256.1	-2,133.2	1,055.9	1,004.2	51.67	20.437	
7,167.0	7,030.7	9,784.9	7,550.0	26.8	53.6	-24.02	261.0	-2,133.7	1,009.0	956.9	52.04	19.388	
7,200.0	7,063.0	9,786.6	7,550.0	27.0	53.7	-9.09	262.6	-2,133.8	986.6	933.6	52.98	18.623	
7,250.0	7,111.9	9,786.2	7,550.0	27.2	53.7	13.16	262.3	-2,133.8	953.7	899.4	54.23	17.584	
7,300.0	7,160.6	9,782.4	7,550.0	27.3	53.6	31.87	258.5	-2,133.4	922.1	866.8	55.28	16.679	
7,350.0	7,208.9	9,775.1	7,550.0	27.5	53.5	45.95	251.2	-2,132.7	892.1	836.0	56.10	15.901	
7,400.0	7,256.5	9,764.4	7,550.0	27.6	53.4	56.15	240.6	-2,131.7	864.0	807.3	56.69	15.242	
7,450.0	7,303.1	9,750.3	7,550.0	27.8	53.2	63.49	226.6	-2,130.4	838.0	781.0	57.02	14.697	
7,500.0	7,348.7	9,733.0	7,550.0	27.9	53.0	68.75	209.3	-2,128.7	814.2	757.1	57.10	14.260	
7,550.0	7,392.8	9,712.4	7,550.0	28.0	52.8	72.48	188.8	-2,126.7	792.7	735.8	56.92	13.925	
7,600.0	7,435.4	9,688.7	7,550.0	28.1	52.5	75.05	165.3	-2,124.5	773.6	717.1	56.52	13.687	
7,650.0	7,476.2	9,662.1	7,550.0	28.2	52.2	76.71	138.7	-2,121.9	756.9	701.0	55.90	13.539	
7,700.0	7,515.1	9,632.5	7,550.0	28.3	51.8	77.65	109.3	-2,119.1	742.5	687.3	55.10	13.474	
7,750.0	7,551.7	9,600.3	7,550.0	28.4	51.5	78.01	77.2	-2,116.0	730.2	676.0	54.16	13.483	
7,800.0	7,586.0	9,565.4	7,550.0	28.5	51.1	77.93	42.5	-2,112.7	719.9	666.8	53.10	13.559	
7,850.0	7,617.8	9,528.2	7,550.0	28.6	50.7	77.51	5.5	-2,109.1	711.4	659.5	51.97	13.690	
7,900.0	7,646.9	9,488.8	7,550.0	28.7	50.2	76.84	-33.8	-2,105.3	704.4	653.6	50.81	13.864	
7,950.0	7,673.1	9,447.3	7,550.0	28.8	49.8	76.02	-75.0	-2,101.4	698.6	649.0	49.67	14.065	
8,000.0	7,696.5	9,404.0	7,550.0	29.0	49.3	75.14	-118.1	-2,097.2	693.8	645.2	48.60	14.277	
8,050.0	7,716.7	9,359.2	7,550.0	29.1	48.8	74.25	-162.8	-2,092.9	689.6	642.0	47.63	14.479	
8,100.0	7,733.9	9,312.9	7,550.0	29.3	48.3	73.43	-208.9	-2,088.5	685.9	639.1	46.80	14.654	
8,150.0	7,747.7	9,265.4	7,550.0	29.4	47.8	72.74	-256.1	-2,084.0	682.2	636.1	46.15	14.784	
8,200.0	7,758.3	9,217.1	7,550.0	29.6	47.4	72.22	-304.2	-2,079.3	678.6	632.9	45.68	14.857	
8,250.0	7,765.5	9,168.0	7,550.0	29.8	46.9	71.92	-353.1	-2,074.6	674.8	629.4	45.39	14.867	
8,300.0	7,769.3	9,118.5	7,550.0	30.0	46.4	71.86	-402.4	-2,069.9	670.6	625.3	45.26	14.817	
8,330.9	7,770.0	9,087.7	7,550.0	30.2	46.1	71.96	-433.0	-2,067.0	667.9	622.6	45.25	14.760	
8,400.0	7,770.0	9,018.9	7,550.0	30.5	45.5	71.78	-501.5	-2,060.4	661.6	616.8	44.78	14.774	
8,500.0	7,770.0	8,919.4	7,550.0	31.1	44.6	71.52	-600.5	-2,050.8	652.5	608.3	44.21	14.759	
8,600.0	7,770.0	8,819.9	7,550.0	31.8	43.8	71.25	-699.6	-2,041.3	643.4	599.7	43.75	14.705	
8,700.0	7,770.0	8,720.3	7,550.0	32.5	43.0	70.97	-798.7	-2,031.8	634.4	591.0	43.40	14.616	
8,800.0	7,770.0	8,620.8	7,550.0	33.3	42.3	70.68	-897.8	-2,022.3	625.3	582.2	43.14	14.495	
8,900.0	7,770.0	8,521.2	7,550.0	34.2	41.7	70.39	-996.9	-2,012.7	616.3	573.3	42.97	14.344	
9,000.0	7,770.0	8,421.7	7,550.0	35.2	41.1	70.09	-1,096.0	-2,003.2	607.3	564.4	42.88	14.164	
9,100.0	7,770.0	8,322.2	7,550.0	36.2	40.6	69.77	-1,195.1	-1,993.7	598.3	555.4	42.87	13.956	
9,200.0	7,770.0	8,222.6	7,550.0	37.3	40.2	69.45	-1,294.1	-1,984.2	589.3	546.4	42.95	13.721	
9,300.0	7,770.0	8,150.0	7,549.5	38.4	39.9	69.18	-1,366.4	-1,977.4	581.3	537.8	43.44	13.382	
9,385.8	7,770.0	8,090.3	7,544.2	39.4	39.7	68.54	-1,425.8	-1,973.3	578.9	535.0	43.85	13.201	CC, ES
9,400.0	7,770.0	8,081.7	7,543.0	39.6	39.7	68.41	-1,434.2	-1,972.9	579.0	535.1	43.93	13.179	
9,500.0	7,770.0	8,022.6	7,531.1	40.8	39.4	67.26	-1,492.1	-1,971.1	583.8	539.3	44.47	13.127	SF
9,600.0	7,770.0	7,966.2	7,514.6	42.0	39.2	65.78	-1,545.9	-1,971.1	596.0	551.0	44.97	13.252	
9,700.0	7,770.0	7,913.5	7,494.6	43.3	39.1	64.09	-1,594.7	-1,972.6	615.9	570.4	45.45	13.550	
9,800.0	7,770.0	7,864.8	7,472.5	44.6	38.9	62.34	-1,638.0	-1,975.4	643.6	597.6	45.94	14.011	
9,900.0	7,770.0	7,820.3	7,449.3	46.0	38.7	60.61	-1,675.8	-1,979.0	679.0	632.5	46.43	14.622	
10,000.0	7,770.0	7,779.9	7,426.0	47.4	38.6	58.97	-1,708.4	-1,983.2	721.6	674.7	46.96	15.366	
10,100.0	7,770.0	7,750.0	7,407.3	48.7	38.5	57.73	-1,731.5	-1,986.8	771.1	723.4	47.67	16.174	
10,200.0	7,770.0	7,700.0	7,373.6	50.2	38.3	55.64	-1,767.8	-1,993.9	826.6	778.7	47.88	17.264	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,300.0	7,770.0	7,681.4	7,360.4	51.6	38.2	54.87	-1,780.5	-1,996.8	887.2	838.4	48.80	18.182	
10,400.0	7,770.0	7,650.0	7,337.2	53.1	38.1	53.57	-1,800.9	-2,002.1	952.7	903.3	49.37	19.297	
10,500.0	7,770.0	7,631.2	7,322.8	54.6	38.0	52.81	-1,812.6	-2,005.5	1,022.1	971.9	50.24	20.346	
10,600.0	7,770.0	7,600.0	7,298.1	56.1	37.8	51.56	-1,830.8	-2,011.5	1,095.2	1,044.4	50.76	21.574	
10,700.0	7,770.0	7,600.0	7,298.1	57.6	37.8	51.56	-1,830.8	-2,011.5	1,171.1	1,119.1	52.08	22.489	
10,800.0	7,770.0	7,572.7	7,275.9	59.1	37.7	50.50	-1,845.5	-2,017.0	1,249.5	1,196.9	52.67	23.725	
10,900.0	7,770.0	7,550.0	7,256.9	60.6	37.6	49.64	-1,857.0	-2,021.9	1,330.3	1,277.0	53.36	24.933	
11,000.0	7,770.0	7,550.0	7,256.9	62.2	37.6	49.64	-1,857.0	-2,021.9	1,413.0	1,358.4	54.64	25.859	
11,100.0	7,770.0	7,528.8	7,238.8	63.7	37.5	48.86	-1,867.0	-2,026.6	1,497.3	1,442.0	55.35	27.052	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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-Sosa 2F-7H-E168 - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,770.0	7,730.4	7,573.3	35.2	25.6	82.90	-1,505.3	-2,876.6	1,525.5	1,486.2	39.25	38.867	
9,100.0	7,770.0	7,764.5	7,597.6	36.2	25.5	83.83	-1,529.0	-2,872.5	1,497.3	1,456.7	40.61	36.869	
9,200.0	7,770.0	7,800.0	7,621.2	37.3	25.5	84.75	-1,555.1	-2,868.4	1,473.7	1,431.7	42.00	35.086	
9,300.0	7,770.0	7,850.0	7,651.8	38.4	25.4	85.95	-1,594.3	-2,863.2	1,454.4	1,411.0	43.38	33.527	
9,400.0	7,770.0	7,900.0	7,678.9	39.6	25.4	87.02	-1,636.0	-2,858.5	1,439.1	1,394.4	44.78	32.135	
9,500.0	7,770.0	7,950.0	7,702.4	40.8	25.4	87.96	-1,680.0	-2,854.5	1,427.6	1,381.4	46.23	30.883	
9,600.0	7,770.0	8,011.3	7,725.8	42.0	25.3	88.90	-1,736.5	-2,850.5	1,419.4	1,371.7	47.70	29.758	
9,700.0	7,770.0	8,076.7	7,744.0	43.3	25.3	89.64	-1,799.1	-2,847.4	1,414.1	1,364.8	49.24	28.719	
9,800.0	7,770.0	8,150.0	7,756.0	44.6	25.3	90.12	-1,871.4	-2,845.4	1,411.1	1,360.3	50.87	27.741	
9,892.1	7,770.0	8,211.9	7,759.0	45.9	25.4	90.24	-1,933.2	-2,844.9	1,410.3	1,357.9	52.48	26.876	CC
9,900.0	7,770.0	8,219.8	7,759.0	46.0	25.4	90.24	-1,941.1	-2,844.9	1,410.3	1,357.7	52.63	26.798	
10,000.0	7,770.0	8,319.8	7,759.0	47.4	25.6	90.24	-2,041.1	-2,844.9	1,410.4	1,355.7	54.62	25.819	
10,100.0	7,770.0	8,419.8	7,759.0	48.7	25.9	90.24	-2,141.1	-2,844.9	1,410.4	1,353.6	56.82	24.823	
10,200.0	7,770.0	8,519.8	7,759.0	50.2	26.3	90.24	-2,241.1	-2,844.9	1,410.4	1,351.2	59.19	23.826	
10,300.0	7,770.0	8,619.8	7,759.0	51.6	26.8	90.24	-2,341.1	-2,845.0	1,410.4	1,348.7	61.73	22.847	
10,400.0	7,770.0	8,719.8	7,759.0	53.1	27.4	90.24	-2,441.1	-2,845.0	1,410.4	1,346.0	64.41	21.898	
10,500.0	7,770.0	8,819.8	7,759.0	54.6	28.2	90.24	-2,541.1	-2,845.0	1,410.4	1,343.2	67.20	20.989	
10,600.0	7,770.0	8,919.8	7,759.0	56.1	29.0	90.24	-2,641.1	-2,845.0	1,410.5	1,340.4	70.09	20.124	
10,700.0	7,770.0	9,019.8	7,759.0	57.6	29.9	90.24	-2,741.1	-2,845.0	1,410.5	1,337.4	73.06	19.307	
10,800.0	7,770.0	9,119.8	7,759.0	59.1	30.8	90.24	-2,841.1	-2,845.0	1,410.5	1,334.4	76.09	18.536	
10,900.0	7,770.0	9,219.8	7,759.0	60.6	31.9	90.24	-2,941.1	-2,845.1	1,410.5	1,331.3	79.19	17.812	
11,000.0	7,770.0	9,319.8	7,759.0	62.2	33.0	90.24	-3,041.1	-2,845.1	1,410.5	1,328.2	82.33	17.133	
11,100.0	7,770.0	9,419.8	7,759.0	63.7	34.1	90.24	-3,141.1	-2,845.1	1,410.5	1,325.0	85.51	16.496	
11,200.0	7,770.0	9,519.8	7,759.0	65.3	35.3	90.24	-3,241.1	-2,845.1	1,410.6	1,321.8	88.73	15.898	
11,300.0	7,770.0	9,619.8	7,759.0	66.9	36.6	90.24	-3,341.1	-2,845.1	1,410.6	1,318.6	91.97	15.337	
11,400.0	7,770.0	9,719.8	7,759.0	68.5	37.8	90.24	-3,441.1	-2,845.1	1,410.6	1,315.3	95.24	14.811	
11,500.0	7,770.0	9,819.8	7,759.0	70.1	39.2	90.24	-3,541.1	-2,845.1	1,410.6	1,312.1	98.53	14.316	
11,600.0	7,770.0	9,919.8	7,759.0	71.7	40.5	90.24	-3,641.1	-2,845.2	1,410.6	1,308.8	101.84	13.851	
11,700.0	7,770.0	10,019.8	7,759.0	73.3	41.9	90.24	-3,741.1	-2,845.2	1,410.6	1,305.5	105.17	13.413	
11,800.0	7,770.0	10,119.8	7,759.0	74.9	43.3	90.24	-3,841.1	-2,845.2	1,410.6	1,302.1	108.51	13.000	
11,900.0	7,770.0	10,219.8	7,759.0	76.5	44.8	90.24	-3,941.1	-2,845.2	1,410.7	1,298.8	111.87	12.610	
12,000.0	7,770.0	10,319.8	7,759.0	78.1	46.2	90.24	-4,041.1	-2,845.2	1,410.7	1,295.4	115.24	12.242	
12,100.0	7,770.0	10,419.8	7,759.0	79.8	47.7	90.24	-4,141.1	-2,845.2	1,410.7	1,292.1	118.61	11.893	
12,200.0	7,770.0	10,519.8	7,759.0	81.4	49.2	90.24	-4,241.1	-2,845.3	1,410.7	1,288.7	122.00	11.563	
12,300.0	7,770.0	10,619.8	7,759.0	83.0	50.7	90.24	-4,341.1	-2,845.3	1,410.7	1,285.3	125.39	11.251	
12,400.0	7,770.0	10,719.8	7,759.0	84.7	52.3	90.24	-4,441.1	-2,845.3	1,410.7	1,282.0	128.79	10.954	
12,500.0	7,770.0	10,819.8	7,759.0	86.3	53.8	90.24	-4,541.1	-2,845.3	1,410.8	1,278.6	132.20	10.671	
12,600.0	7,770.0	10,919.8	7,759.0	88.0	55.4	90.24	-4,641.1	-2,845.3	1,410.8	1,275.2	135.62	10.403	
12,700.0	7,770.0	11,019.8	7,759.0	89.7	56.9	90.24	-4,741.1	-2,845.3	1,410.8	1,271.8	139.04	10.147	
12,800.0	7,770.0	11,119.8	7,759.0	91.3	58.5	90.24	-4,841.1	-2,845.4	1,410.8	1,268.3	142.46	9.903	
12,900.0	7,770.0	11,219.8	7,759.0	93.0	60.1	90.24	-4,941.1	-2,845.4	1,410.8	1,264.9	145.89	9.671	
13,000.0	7,770.0	11,319.8	7,759.0	94.7	61.7	90.24	-5,041.1	-2,845.4	1,410.8	1,261.5	149.32	9.448	
13,100.0	7,770.0	11,419.8	7,759.0	96.3	63.3	90.24	-5,141.1	-2,845.4	1,410.9	1,258.1	152.76	9.236	
13,200.0	7,770.0	11,519.8	7,759.0	98.0	64.9	90.24	-5,241.1	-2,845.4	1,410.9	1,254.7	156.20	9.032	
13,300.0	7,770.0	11,619.8	7,759.0	99.7	66.5	90.24	-5,341.1	-2,845.4	1,410.9	1,251.2	159.65	8.838	
13,400.0	7,770.0	11,719.8	7,759.0	101.4	68.2	90.24	-5,441.1	-2,845.5	1,410.9	1,247.8	163.09	8.651	
13,500.0	7,770.0	11,819.8	7,759.0	103.1	69.8	90.24	-5,541.1	-2,845.5	1,410.9	1,244.4	166.54	8.472	
13,600.0	7,770.0	11,919.8	7,759.0	104.7	71.4	90.24	-5,641.1	-2,845.5	1,410.9	1,240.9	170.00	8.300	
13,700.0	7,770.0	12,019.8	7,759.0	106.4	73.1	90.24	-5,741.1	-2,845.5	1,411.0	1,237.5	173.45	8.135	
13,800.0	7,770.0	12,119.8	7,759.0	108.1	74.7	90.24	-5,841.1	-2,845.5	1,411.0	1,234.1	176.91	7.976	
13,900.0	7,770.0	12,219.8	7,759.0	109.8	76.4	90.24	-5,941.1	-2,845.5	1,411.0	1,230.6	180.37	7.823	
14,000.0	7,770.0	12,319.8	7,759.0	111.5	78.0	90.24	-6,041.1	-2,845.6	1,411.0	1,227.2	183.83	7.676	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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-Sosa 2F-7H-E168 - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,100.0	7,770.0	12,419.8	7,759.0	113.2	79.7	90.24	-6,141.1	-2,845.6	1,411.0	1,223.7	187.30	7.534	
14,200.0	7,770.0	12,519.8	7,759.0	114.9	81.4	90.24	-6,241.1	-2,845.6	1,411.0	1,220.3	190.76	7.397	
14,300.0	7,770.0	12,619.8	7,759.0	116.6	83.0	90.24	-6,341.1	-2,845.6	1,411.1	1,216.8	194.23	7.265	
14,400.0	7,770.0	12,719.8	7,759.0	118.3	84.7	90.24	-6,441.1	-2,845.6	1,411.1	1,213.4	197.70	7.138	
14,500.0	7,770.0	12,819.8	7,759.0	120.0	86.4	90.24	-6,541.1	-2,845.6	1,411.1	1,209.9	201.17	7.015	
14,600.0	7,770.0	12,919.8	7,759.0	121.7	88.1	90.24	-6,641.1	-2,845.7	1,411.1	1,206.5	204.64	6.896	
14,700.0	7,770.0	13,019.8	7,759.0	123.4	89.7	90.24	-6,741.1	-2,845.7	1,411.1	1,203.0	208.11	6.781	
14,800.0	7,770.0	13,119.8	7,759.0	125.1	91.4	90.24	-6,841.1	-2,845.7	1,411.1	1,199.5	211.59	6.669	
14,900.0	7,770.0	13,219.8	7,759.0	126.8	93.1	90.24	-6,941.1	-2,845.7	1,411.2	1,196.1	215.06	6.562	
15,000.0	7,770.0	13,319.8	7,759.0	128.5	94.8	90.24	-7,041.1	-2,845.7	1,411.2	1,192.6	218.54	6.457	
15,100.0	7,770.0	13,419.8	7,759.0	130.2	96.5	90.24	-7,141.1	-2,845.7	1,411.2	1,189.2	222.02	6.356	
15,200.0	7,770.0	13,519.8	7,759.0	132.0	98.2	90.24	-7,241.1	-2,845.7	1,411.2	1,185.7	225.49	6.258	
15,300.0	7,770.0	13,619.8	7,759.0	133.7	99.9	90.24	-7,341.1	-2,845.8	1,411.2	1,182.2	228.97	6.163	
15,400.0	7,770.0	13,719.8	7,759.0	135.4	101.6	90.24	-7,441.1	-2,845.8	1,411.2	1,178.8	232.45	6.071	
15,500.0	7,770.0	13,819.8	7,759.0	137.1	103.3	90.24	-7,541.1	-2,845.8	1,411.2	1,175.3	235.94	5.981	
15,600.0	7,770.0	13,919.8	7,759.0	138.8	105.0	90.24	-7,641.1	-2,845.8	1,411.3	1,171.8	239.42	5.895	
15,700.0	7,770.0	14,019.8	7,759.0	140.5	106.7	90.24	-7,741.1	-2,845.8	1,411.3	1,168.4	242.90	5.810	
15,800.0	7,770.0	14,119.8	7,759.0	142.2	108.4	90.24	-7,841.1	-2,845.8	1,411.3	1,164.9	246.38	5.728	
15,900.0	7,770.0	14,219.8	7,759.0	144.0	110.1	90.24	-7,941.1	-2,845.9	1,411.3	1,161.4	249.87	5.648	
16,000.0	7,770.0	14,319.8	7,759.0	145.7	111.8	90.24	-8,041.1	-2,845.9	1,411.3	1,158.0	253.35	5.571	
16,100.0	7,770.0	14,419.8	7,759.0	147.4	113.5	90.24	-8,141.1	-2,845.9	1,411.3	1,154.5	256.84	5.495	
16,200.0	7,770.0	14,519.8	7,759.0	149.1	115.2	90.24	-8,241.1	-2,845.9	1,411.4	1,151.0	260.33	5.422	
16,300.0	7,770.0	14,619.8	7,759.0	150.8	117.0	90.24	-8,341.1	-2,845.9	1,411.4	1,147.6	263.81	5.350	
16,400.0	7,770.0	14,719.8	7,759.0	152.6	118.7	90.24	-8,441.1	-2,845.9	1,411.4	1,144.1	267.30	5.280	
16,500.0	7,770.0	14,819.8	7,759.0	154.3	120.4	90.24	-8,541.1	-2,846.0	1,411.4	1,140.6	270.79	5.212	
16,600.0	7,770.0	14,919.8	7,759.0	156.0	122.1	90.24	-8,641.1	-2,846.0	1,411.4	1,137.1	274.28	5.146	
16,700.0	7,770.0	15,019.8	7,759.0	157.7	123.8	90.24	-8,741.1	-2,846.0	1,411.4	1,133.7	277.77	5.081	
16,800.0	7,770.0	15,119.8	7,759.0	159.5	125.5	90.24	-8,841.1	-2,846.0	1,411.5	1,130.2	281.26	5.018	
16,900.0	7,770.0	15,219.8	7,759.0	161.2	127.3	90.24	-8,941.1	-2,846.0	1,411.5	1,126.7	284.75	4.957	
17,000.0	7,770.0	15,319.8	7,759.0	162.9	129.0	90.24	-9,041.1	-2,846.0	1,411.5	1,123.3	288.24	4.897	
17,100.0	7,770.0	15,419.8	7,759.0	164.6	130.7	90.24	-9,141.1	-2,846.1	1,411.5	1,119.8	291.73	4.838	
17,200.0	7,770.0	15,519.8	7,759.0	166.4	132.4	90.24	-9,241.1	-2,846.1	1,411.5	1,116.3	295.22	4.781	
17,300.0	7,770.0	15,619.8	7,759.0	168.1	134.1	90.24	-9,341.1	-2,846.1	1,411.5	1,112.8	298.71	4.725	
17,400.0	7,770.0	15,719.8	7,759.0	169.8	135.9	90.24	-9,441.1	-2,846.1	1,411.6	1,109.4	302.20	4.671	
17,500.0	7,770.0	15,819.8	7,759.0	171.6	137.6	90.24	-9,541.1	-2,846.1	1,411.6	1,105.9	305.70	4.618	
17,600.0	7,770.0	15,919.8	7,759.0	173.3	139.3	90.24	-9,641.1	-2,846.1	1,411.6	1,102.4	309.19	4.565	
17,700.0	7,770.0	16,019.8	7,759.0	175.0	141.0	90.24	-9,741.1	-2,846.2	1,411.6	1,098.9	312.68	4.514	
17,740.8	7,770.0	16,060.6	7,759.0	175.7	141.7	90.24	-9,781.8	-2,846.2	1,411.6	1,097.5	314.11	4.494	
17,775.9	7,770.0	16,087.8	7,759.0	176.3	142.2	90.24	-9,809.1	-2,846.2	1,411.6	1,096.4	315.20	4.479	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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-Sosa 2G-7H-E168 - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,400.0	7,770.0	7,650.0	7,459.9	30.5	30.7	75.42	-1,429.6	-2,561.2	1,527.1	1,495.3	31.83	47.976	
8,500.0	7,770.0	7,670.0	7,477.0	31.1	30.7	76.19	-1,439.2	-2,557.4	1,464.0	1,431.1	32.84	44.575	
8,600.0	7,770.0	7,700.0	7,502.1	31.8	30.8	77.34	-1,454.7	-2,551.9	1,404.7	1,370.7	33.96	41.362	
8,700.0	7,770.0	7,700.0	7,502.1	32.5	30.8	77.34	-1,454.7	-2,551.9	1,349.2	1,314.0	35.16	38.370	
8,800.0	7,770.0	7,733.0	7,528.7	33.3	30.8	78.59	-1,473.4	-2,546.0	1,298.1	1,261.7	36.43	35.633	
8,900.0	7,770.0	7,750.0	7,541.9	34.2	30.8	79.22	-1,483.6	-2,543.0	1,251.9	1,214.2	37.76	33.152	
9,000.0	7,770.0	7,800.0	7,579.2	35.2	30.8	81.02	-1,515.9	-2,534.8	1,210.7	1,171.6	39.11	30.955	
9,100.0	7,770.0	7,823.2	7,595.5	36.2	30.8	81.83	-1,531.9	-2,531.2	1,174.7	1,134.2	40.53	28.987	
9,200.0	7,770.0	7,861.5	7,621.0	37.3	30.8	83.10	-1,560.0	-2,525.5	1,144.2	1,102.2	41.95	27.277	
9,300.0	7,770.0	7,900.0	7,644.8	38.4	30.8	84.31	-1,589.8	-2,520.2	1,119.0	1,075.6	43.39	25.790	
9,400.0	7,770.0	7,950.0	7,672.6	39.6	30.8	85.74	-1,630.8	-2,514.1	1,099.0	1,054.1	44.83	24.514	
9,500.0	7,770.0	8,000.0	7,696.8	40.8	30.8	87.01	-1,674.2	-2,508.7	1,083.8	1,037.5	46.30	23.410	
9,600.0	7,770.0	8,069.2	7,724.1	42.0	30.8	88.45	-1,737.5	-2,502.6	1,072.8	1,025.0	47.77	22.457	
9,700.0	7,770.0	8,134.8	7,742.9	43.3	30.8	89.45	-1,800.2	-2,498.5	1,065.6	1,016.3	49.31	21.608	
9,800.0	7,770.0	8,200.0	7,754.5	44.6	30.8	90.08	-1,864.2	-2,495.9	1,061.6	1,010.7	50.94	20.841	
9,895.5	7,770.0	8,272.7	7,759.0	45.9	30.9	90.32	-1,936.8	-2,494.9	1,060.4	1,007.8	52.60	20.158	CC
9,900.0	7,770.0	8,277.1	7,759.0	46.0	30.9	90.32	-1,941.1	-2,494.9	1,060.4	1,007.7	52.69	20.125	
10,000.0	7,770.0	8,377.1	7,759.0	47.4	31.0	90.32	-2,041.1	-2,494.9	1,060.4	1,005.7	54.68	19.392	
10,100.0	7,770.0	8,477.1	7,759.0	48.7	31.2	90.32	-2,141.1	-2,495.0	1,060.4	1,003.6	56.86	18.649	
10,200.0	7,770.0	8,577.1	7,759.0	50.2	31.6	90.32	-2,241.1	-2,495.0	1,060.4	1,001.2	59.23	17.905	
10,300.0	7,770.0	8,677.1	7,759.0	51.6	32.0	90.32	-2,341.1	-2,495.0	1,060.4	998.7	61.75	17.173	
10,400.0	7,770.0	8,777.1	7,759.0	53.1	32.5	90.32	-2,441.1	-2,495.0	1,060.5	996.0	64.42	16.463	
10,500.0	7,770.0	8,877.1	7,759.0	54.6	33.1	90.32	-2,541.1	-2,495.0	1,060.5	993.3	67.20	15.782	
10,600.0	7,770.0	8,977.1	7,759.0	56.1	33.8	90.32	-2,641.1	-2,495.0	1,060.5	990.4	70.08	15.133	
10,700.0	7,770.0	9,077.1	7,759.0	57.6	34.5	90.32	-2,741.1	-2,495.1	1,060.5	987.5	73.04	14.520	
10,800.0	7,770.0	9,177.1	7,759.0	59.1	35.4	90.32	-2,841.1	-2,495.1	1,060.5	984.5	76.07	13.942	
10,900.0	7,770.0	9,277.1	7,759.0	60.6	36.2	90.32	-2,941.1	-2,495.1	1,060.5	981.4	79.16	13.398	
11,000.0	7,770.0	9,377.1	7,759.0	62.2	37.2	90.32	-3,041.1	-2,495.1	1,060.6	978.3	82.29	12.888	
11,100.0	7,770.0	9,477.1	7,759.0	63.7	38.2	90.32	-3,141.1	-2,495.1	1,060.6	975.1	85.47	12.409	
11,200.0	7,770.0	9,577.1	7,759.0	65.3	39.3	90.32	-3,241.1	-2,495.1	1,060.6	971.9	88.68	11.959	
11,300.0	7,770.0	9,677.1	7,759.0	66.9	40.4	90.32	-3,341.1	-2,495.2	1,060.6	968.7	91.92	11.538	
11,400.0	7,770.0	9,777.1	7,759.0	68.5	41.5	90.32	-3,441.1	-2,495.2	1,060.6	965.4	95.19	11.142	
11,500.0	7,770.0	9,877.1	7,759.0	70.1	42.7	90.32	-3,541.1	-2,495.2	1,060.6	962.2	98.48	10.770	
11,600.0	7,770.0	9,977.1	7,759.0	71.7	44.0	90.32	-3,641.1	-2,495.2	1,060.7	958.9	101.79	10.420	
11,700.0	7,770.0	10,077.1	7,759.0	73.3	45.2	90.32	-3,741.1	-2,495.2	1,060.7	955.6	105.11	10.091	
11,800.0	7,770.0	10,177.1	7,759.0	74.9	46.5	90.32	-3,841.1	-2,495.2	1,060.7	952.2	108.45	9.780	
11,900.0	7,770.0	10,277.1	7,759.0	76.5	47.9	90.32	-3,941.1	-2,495.3	1,060.7	948.9	111.81	9.487	
12,000.0	7,770.0	10,377.1	7,759.0	78.1	49.2	90.32	-4,041.1	-2,495.3	1,060.7	945.6	115.17	9.210	
12,100.0	7,770.0	10,477.1	7,759.0	79.8	50.6	90.32	-4,141.1	-2,495.3	1,060.7	942.2	118.55	8.948	
12,200.0	7,770.0	10,577.1	7,759.0	81.4	52.0	90.32	-4,241.1	-2,495.3	1,060.8	938.8	121.93	8.700	
12,300.0	7,770.0	10,677.1	7,759.0	83.0	53.5	90.32	-4,341.1	-2,495.3	1,060.8	935.4	125.32	8.464	
12,400.0	7,770.0	10,777.1	7,759.0	84.7	54.9	90.32	-4,441.1	-2,495.3	1,060.8	932.1	128.72	8.241	
12,500.0	7,770.0	10,877.1	7,759.0	86.3	56.4	90.32	-4,541.1	-2,495.3	1,060.8	928.7	132.13	8.028	
12,600.0	7,770.0	10,977.1	7,759.0	88.0	57.9	90.32	-4,641.1	-2,495.4	1,060.8	925.3	135.54	7.826	
12,700.0	7,770.0	11,077.1	7,759.0	89.7	59.4	90.32	-4,741.1	-2,495.4	1,060.8	921.9	138.96	7.634	
12,800.0	7,770.0	11,177.1	7,759.0	91.3	60.9	90.32	-4,841.1	-2,495.4	1,060.9	918.5	142.39	7.451	
12,900.0	7,770.0	11,277.1	7,759.0	93.0	62.4	90.32	-4,941.1	-2,495.4	1,060.9	915.1	145.81	7.275	
13,000.0	7,770.0	11,377.1	7,759.0	94.7	63.9	90.32	-5,041.1	-2,495.4	1,060.9	911.6	149.25	7.108	
13,100.0	7,770.0	11,477.1	7,759.0	96.3	65.5	90.32	-5,141.1	-2,495.4	1,060.9	908.2	152.68	6.948	
13,200.0	7,770.0	11,577.1	7,759.0	98.0	67.0	90.32	-5,241.1	-2,495.5	1,060.9	904.8	156.12	6.795	
13,300.0	7,770.0	11,677.1	7,759.0	99.7	68.6	90.32	-5,341.1	-2,495.5	1,060.9	901.4	159.57	6.649	
13,400.0	7,770.0	11,777.1	7,759.0	101.4	70.2	90.32	-5,441.1	-2,495.5	1,061.0	897.9	163.01	6.508	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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-Sosa 2G-7H-E168 - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

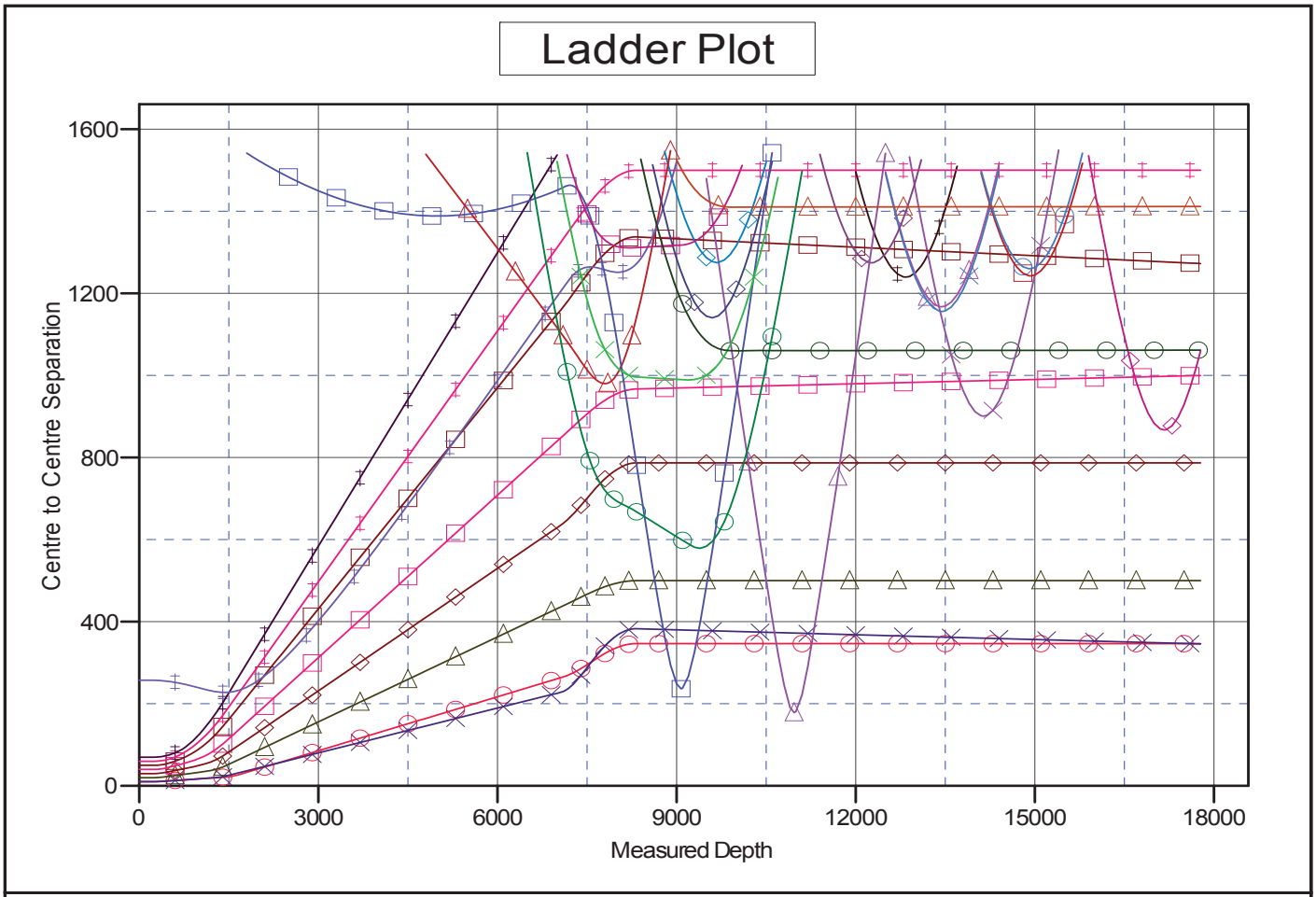
Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,500.0	7,770.0	11,877.1	7,759.0	103.1	71.8	90.32	-5,541.1	-2,495.5	1,061.0	894.5	166.46	6.374	
13,600.0	7,770.0	11,977.1	7,759.0	104.7	73.4	90.32	-5,641.1	-2,495.5	1,061.0	891.1	169.92	6.244	
13,700.0	7,770.0	12,077.1	7,759.0	106.4	75.0	90.32	-5,741.1	-2,495.5	1,061.0	887.6	173.37	6.120	
13,800.0	7,770.0	12,177.1	7,759.0	108.1	76.6	90.32	-5,841.1	-2,495.6	1,061.0	884.2	176.83	6.000	
13,900.0	7,770.0	12,277.1	7,759.0	109.8	78.2	90.32	-5,941.1	-2,495.6	1,061.0	880.7	180.29	5.885	
14,000.0	7,770.0	12,377.1	7,759.0	111.5	79.8	90.32	-6,041.1	-2,495.6	1,061.0	877.3	183.75	5.774	
14,100.0	7,770.0	12,477.1	7,759.0	113.2	81.4	90.32	-6,141.1	-2,495.6	1,061.1	873.9	187.21	5.668	
14,200.0	7,770.0	12,577.1	7,759.0	114.9	83.0	90.32	-6,241.1	-2,495.6	1,061.1	870.4	190.68	5.565	
14,300.0	7,770.0	12,677.1	7,759.0	116.6	84.7	90.32	-6,341.1	-2,495.6	1,061.1	867.0	194.14	5.465	
14,400.0	7,770.0	12,777.1	7,759.0	118.3	86.3	90.32	-6,441.1	-2,495.7	1,061.1	863.5	197.61	5.370	
14,500.0	7,770.0	12,877.1	7,759.0	120.0	88.0	90.32	-6,541.1	-2,495.7	1,061.1	860.0	201.08	5.277	
14,600.0	7,770.0	12,977.1	7,759.0	121.7	89.6	90.32	-6,641.1	-2,495.7	1,061.1	856.6	204.55	5.188	
14,700.0	7,770.0	13,077.1	7,759.0	123.4	91.3	90.32	-6,741.1	-2,495.7	1,061.2	853.1	208.03	5.101	
14,800.0	7,770.0	13,177.1	7,759.0	125.1	92.9	90.32	-6,841.1	-2,495.7	1,061.2	849.7	211.50	5.017	
14,900.0	7,770.0	13,277.1	7,759.0	126.8	94.6	90.32	-6,941.1	-2,495.7	1,061.2	846.2	214.98	4.936	
15,000.0	7,770.0	13,377.1	7,759.0	128.5	96.2	90.32	-7,041.1	-2,495.8	1,061.2	842.8	218.45	4.858	
15,100.0	7,770.0	13,477.1	7,759.0	130.2	97.9	90.32	-7,141.1	-2,495.8	1,061.2	839.3	221.93	4.782	
15,200.0	7,770.0	13,577.1	7,759.0	132.0	99.6	90.32	-7,241.1	-2,495.8	1,061.2	835.8	225.41	4.708	
15,300.0	7,770.0	13,677.1	7,759.0	133.7	101.2	90.32	-7,341.1	-2,495.8	1,061.3	832.4	228.89	4.637	
15,400.0	7,770.0	13,777.1	7,759.0	135.4	102.9	90.32	-7,441.1	-2,495.8	1,061.3	828.9	232.37	4.567	
15,500.0	7,770.0	13,877.1	7,759.0	137.1	104.6	90.32	-7,541.1	-2,495.8	1,061.3	825.4	235.85	4.500	
15,600.0	7,770.0	13,977.1	7,759.0	138.8	106.3	90.32	-7,641.1	-2,495.9	1,061.3	822.0	239.33	4.434	
15,700.0	7,770.0	14,077.1	7,759.0	140.5	108.0	90.32	-7,741.1	-2,495.9	1,061.3	818.5	242.81	4.371	
15,800.0	7,770.0	14,177.1	7,759.0	142.2	109.6	90.32	-7,841.1	-2,495.9	1,061.3	815.0	246.30	4.309	
15,900.0	7,770.0	14,277.1	7,759.0	144.0	111.3	90.32	-7,941.1	-2,495.9	1,061.4	811.6	249.78	4.249	
16,000.0	7,770.0	14,377.1	7,759.0	145.7	113.0	90.32	-8,041.1	-2,495.9	1,061.4	808.1	253.27	4.191	
16,100.0	7,770.0	14,477.1	7,759.0	147.4	114.7	90.32	-8,141.1	-2,495.9	1,061.4	804.6	256.75	4.134	
16,200.0	7,770.0	14,577.1	7,759.0	149.1	116.4	90.32	-8,241.1	-2,495.9	1,061.4	801.2	260.24	4.079	
16,300.0	7,770.0	14,677.1	7,759.0	150.8	118.1	90.32	-8,341.1	-2,496.0	1,061.4	797.7	263.72	4.025	
16,400.0	7,770.0	14,777.1	7,759.0	152.6	119.8	90.32	-8,441.1	-2,496.0	1,061.4	794.2	267.21	3.972	
16,500.0	7,770.0	14,877.1	7,759.0	154.3	121.5	90.32	-8,541.1	-2,496.0	1,061.5	790.8	270.70	3.921	
16,600.0	7,770.0	14,977.1	7,759.0	156.0	123.2	90.32	-8,641.1	-2,496.0	1,061.5	787.3	274.19	3.871	
16,700.0	7,770.0	15,077.1	7,759.0	157.7	124.9	90.32	-8,741.1	-2,496.0	1,061.5	783.8	277.68	3.823	
16,800.0	7,770.0	15,177.1	7,759.0	159.5	126.6	90.32	-8,841.1	-2,496.0	1,061.5	780.3	281.17	3.775	
16,900.0	7,770.0	15,277.1	7,759.0	161.2	128.3	90.32	-8,941.1	-2,496.1	1,061.5	776.9	284.66	3.729	
17,000.0	7,770.0	15,377.1	7,759.0	162.9	130.0	90.32	-9,041.1	-2,496.1	1,061.5	773.4	288.15	3.684	
17,100.0	7,770.0	15,477.1	7,759.0	164.6	131.7	90.32	-9,141.1	-2,496.1	1,061.6	769.9	291.64	3.640	
17,200.0	7,770.0	15,577.1	7,759.0	166.4	133.4	90.32	-9,241.1	-2,496.1	1,061.6	766.4	295.13	3.597	
17,300.0	7,770.0	15,677.1	7,759.0	168.1	135.1	90.32	-9,341.1	-2,496.1	1,061.6	763.0	298.62	3.555	
17,400.0	7,770.0	15,777.1	7,759.0	169.8	136.8	90.32	-9,441.1	-2,496.1	1,061.6	759.5	302.11	3.514	
17,500.0	7,770.0	15,877.1	7,759.0	171.6	138.5	90.32	-9,541.1	-2,496.2	1,061.6	756.0	305.61	3.474	
17,600.0	7,770.0	15,977.1	7,759.0	173.3	140.3	90.32	-9,641.1	-2,496.2	1,061.6	752.5	309.10	3.435	
17,700.0	7,770.0	16,077.1	7,759.0	175.0	142.0	90.32	-9,741.1	-2,496.2	1,061.6	749.1	312.59	3.396	
17,741.8	7,770.0	16,118.9	7,759.0	175.7	142.7	90.32	-9,782.9	-2,496.2	1,061.7	747.6	314.05	3.380	
17,775.9	7,770.0	16,148.7	7,759.0	176.3	143.2	90.32	-9,812.8	-2,496.2	1,061.7	746.5	315.17	3.369	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1B-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5036.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5036.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1B-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 WELL @ 5036.0ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Morgan Hills 1B-7H-A168
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.30°

Ladder Plot



LEGEND

NG), ENCANA WELL, PLAN ONLY V0
1, ENCANA WELL, NO SURVEYS V0
2, ENCANA WELL, NO SURVEYS V0
3, HZ, Plan #2 V0
3, HZ, Plan #2 V0
3, HZ, Plan #2 V0
3, HZ, Plan #2 V0
3, HZ, Plan #2 V0
8, HZ, Plan #2 V0
Morgan Hills 1H-7H-A168, HZ, Plan #2 V0
Morgan Hills 1I-7H-A168, HZ, Plan #2 V0
Sosa 21-18, DD (MWD), DD V0
Sosa 21-18, DD (MWD), Plan #2 V0
Sosa 22-18, DD, DD V0
Sosa 22-18, DD, Plan #2 V0
THOMAS 24-7 (EXISTING), ENCANA WELL, SURVEYS V0
THOMAS 33-7 (EXISTING), ENCANA WELL, SURVEYS V0
WOOLLEY 22-7 (EXISTING), ENCANA WELL, SURVEYS V0
WOOLLEY 4-0-7 (EXISTING), ENCAN
WOOLLEY 41-7 (EXISTING), ENCAN
WOOLLEY 42-7 ENCANA (EXISTING
WOOLLEY A 1-7 (EXISTING), ENCAN
Woolley-Becky 2F-7H-E168, Hz, Plan #
Woolley-Becky 2G-7H-E168, Hz, Plan #
Woolley-Becky 2H-7H-E168, Hz, Plan #
Woolley-Sosa 2F-7H-E168, HZ, Plan #
Woolley-Sosa 2G-7H-E168, HZ, Plan #