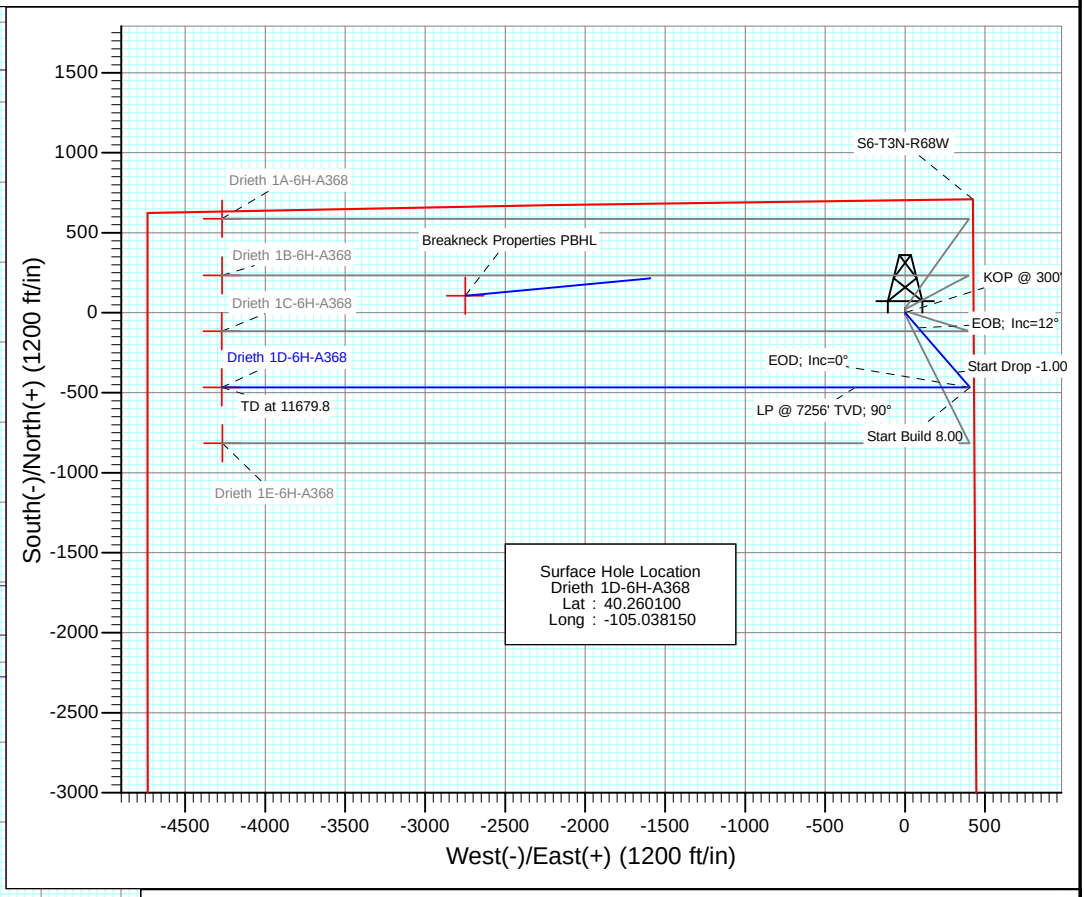
encana natural gas

Project: DJ Wattenberg
Site: S6-T3N-R68W (Zisch/Drieth 1)
Well: Drieth 1D-6H-A368
Wellbore: Hz
Design: Plan #1

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	1500.0	12.00	139.00	1491.2	-94.5	82.1	1.00	139.00	-82.1	
4	3265.0	12.00	139.00	3217.7	-371.4	322.9	0.00	0.00	-322.9	
5	4465.0	0.00	0.00	4408.9	-465.9	405.0	1.00	180.00	-405.0	
6	6595.9	0.00	0.00	6539.8	-465.9	405.0	0.00	0.00	-405.0	
7	7720.9	90.00	270.00	7256.0	-465.9	-311.2	8.00	270.00	311.2	
8	11679.8	90.00	270.00	7256.0	-465.9	-4270.1	0.00	0.00	4270.1	Drieth 1D-6H PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Drieth 1D-6H PBHL	-465.9	-4270.1	1337446.17	3124633.52	40.258820	-105.053450

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
299.0	299.0	Fox Hills - BASE
3523.0	3575.5	Sussex
3831.0	3886.1	Sussex Marker
4092.0	4147.9	Shannon
5999.0	6055.1	Teepee Buttes (*if present)
6813.0	6876.2	Sharon Springs
6887.0	6958.4	Niobrara
7026.0	7130.3	B Chalk
7053.0	7168.0	B Marl
7086.0	7217.1	C Chalk
7124.0	7279.1	C Marl
7226.0	7512.9	Ft. Hayes
7246.0	7601.1	Codell

Azimuths to True North
Magnetic North: 8.70°

Magnetic Field
Strength: 52861.0snT
Dip Angle: 66.84°
Date: 4/15/2013
Model: IGRF200510

Plan #1
Drieth 1D-6H-A368
13xxx; LR
WELL @ 5099.0ft (Original Well Elev)
Ground Elevation @ 5086.0
North American Datum 1983
Well Drieth 1D-6H-A368, True North

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Drieth 1D-6H-A368
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site:	S6-T3N-R68W (Zisch/Drieth 1)	**North Reference:**	True
Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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

Site	S6-T3N-R68W (Zisch/Drieth 1)				
Site Position:		**Northing:**	1,333,692.15 ft	**Latitude:**	40.248510
From:	Lat/Long	**Easting:**	3,124,995.76 ft	**Longitude:**	-105.052220
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.29 °

Well	Drieth 1D-6H-A368					
Well Position	**+N/-S**	0.0 ft	**Northing:**	1,337,934.32 ft	**Latitude:**	40.260100
	+E/-W	0.0 ft	**Easting:**	3,128,901.12 ft	**Longitude:**	-105.038150
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,086.0 ft

Wellbore	Hz			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	4/15/2013	8.70	66.84	52,861

Design	Plan #1			
Audit Notes:				
Version:	**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**
	0.0	0.0	0.0	270.00

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	12.00	139.00	1,491.2	-94.5	82.1	1.00	1.00	0.00	139.00	
3,265.0	12.00	139.00	3,217.7	-371.4	322.9	0.00	0.00	0.00	0.00	
4,465.0	0.00	0.00	4,408.9	-465.9	405.0	1.00	-1.00	0.00	180.00	
6,595.9	0.00	0.00	6,539.8	-465.9	405.0	0.00	0.00	0.00	0.00	
7,720.9	90.00	270.00	7,256.0	-465.9	-311.2	8.00	8.00	0.00	270.00	
11,679.8	90.00	270.00	7,256.0	-465.9	-4,270.1	0.00	0.00	0.00	0.00	Drieth 1D-6H PBHL

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Drieth 1D-6H-A368
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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site:	S6-T3N-R68W (Zisch/Drieth 1)	**North Reference:**	True
Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
299.0	0.00	0.00	299.0	0.0	0.0	0.0	0.00	0.00	Fox Hills - BASE
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300'
400.0	1.00	139.00	400.0	-0.7	0.6	-0.6	1.00	1.00	
500.0	2.00	139.00	500.0	-2.6	2.3	-2.3	1.00	1.00	
600.0	3.00	139.00	599.9	-5.9	5.2	-5.2	1.00	1.00	
700.0	4.00	139.00	699.7	-10.5	9.2	-9.2	1.00	1.00	
800.0	5.00	139.00	799.4	-16.5	14.3	-14.3	1.00	1.00	
900.0	6.00	139.00	898.9	-23.7	20.6	-20.6	1.00	1.00	
1,000.0	7.00	139.00	998.3	-32.2	28.0	-28.0	1.00	1.00	
1,100.0	8.00	139.00	1,097.4	-42.1	36.6	-36.6	1.00	1.00	
1,200.0	9.00	139.00	1,196.3	-53.2	46.3	-46.3	1.00	1.00	
1,300.0	10.00	139.00	1,294.9	-65.7	57.1	-57.1	1.00	1.00	
1,400.0	11.00	139.00	1,393.3	-79.4	69.1	-69.1	1.00	1.00	
1,500.0	12.00	139.00	1,491.2	-94.5	82.1	-82.1	1.00	1.00	EOB; Inc=12°
1,600.0	12.00	139.00	1,589.1	-110.2	95.8	-95.8	0.00	0.00	
1,700.0	12.00	139.00	1,686.9	-125.9	109.4	-109.4	0.00	0.00	
1,800.0	12.00	139.00	1,784.7	-141.6	123.1	-123.1	0.00	0.00	
1,900.0	12.00	139.00	1,882.5	-157.3	136.7	-136.7	0.00	0.00	
2,000.0	12.00	139.00	1,980.3	-172.9	150.3	-150.3	0.00	0.00	
2,100.0	12.00	139.00	2,078.1	-188.6	164.0	-164.0	0.00	0.00	
2,200.0	12.00	139.00	2,175.9	-204.3	177.6	-177.6	0.00	0.00	
2,300.0	12.00	139.00	2,273.8	-220.0	191.3	-191.3	0.00	0.00	
2,400.0	12.00	139.00	2,371.6	-235.7	204.9	-204.9	0.00	0.00	
2,500.0	12.00	139.00	2,469.4	-251.4	218.5	-218.5	0.00	0.00	
2,600.0	12.00	139.00	2,567.2	-267.1	232.2	-232.2	0.00	0.00	
2,700.0	12.00	139.00	2,665.0	-282.8	245.8	-245.8	0.00	0.00	
2,800.0	12.00	139.00	2,762.8	-298.5	259.5	-259.5	0.00	0.00	
2,900.0	12.00	139.00	2,860.7	-314.2	273.1	-273.1	0.00	0.00	
3,000.0	12.00	139.00	2,958.5	-329.9	286.7	-286.7	0.00	0.00	
3,100.0	12.00	139.00	3,056.3	-345.6	300.4	-300.4	0.00	0.00	
3,200.0	12.00	139.00	3,154.1	-361.2	314.0	-314.0	0.00	0.00	
3,265.0	12.00	139.00	3,217.7	-371.4	322.9	-322.9	0.00	0.00	Start Drop -1.00
3,300.0	11.65	139.00	3,251.9	-376.9	327.6	-327.6	1.00	-1.00	
3,400.0	10.65	139.00	3,350.0	-391.5	340.3	-340.3	1.00	-1.00	
3,500.0	9.65	139.00	3,448.5	-404.8	351.8	-351.8	1.00	-1.00	
3,575.5	8.89	139.00	3,523.0	-413.9	359.8	-359.8	1.00	-1.00	Sussex
3,600.0	8.65	139.00	3,547.2	-416.8	362.3	-362.3	1.00	-1.00	
3,700.0	7.65	139.00	3,646.2	-427.5	371.6	-371.6	1.00	-1.00	
3,800.0	6.65	139.00	3,745.4	-436.8	379.7	-379.7	1.00	-1.00	
3,886.1	5.79	139.00	3,831.0	-443.9	385.9	-385.9	1.00	-1.00	Sussex Marker
3,900.0	5.65	139.00	3,844.8	-444.9	386.8	-386.8	1.00	-1.00	
4,000.0	4.65	139.00	3,944.4	-451.7	392.7	-392.7	1.00	-1.00	
4,100.0	3.65	139.00	4,044.2	-457.2	397.4	-397.4	1.00	-1.00	
4,147.9	3.17	139.00	4,092.0	-459.3	399.3	-399.3	1.00	-1.00	Shannon
4,200.0	2.65	139.00	4,144.0	-461.3	401.0	-401.0	1.00	-1.00	
4,300.0	1.65	139.00	4,243.9	-464.1	403.5	-403.5	1.00	-1.00	
4,400.0	0.65	139.00	4,343.9	-465.7	404.8	-404.8	1.00	-1.00	
4,465.0	0.00	0.00	4,408.9	-465.9	405.0	-405.0	1.00	-1.00	EOD; Inc=0°
4,500.0	0.00	0.00	4,443.9	-465.9	405.0	-405.0	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site:	S6-T3N-R68W (Zisch/Drieth 1)	**North Reference:**	True
Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,600.0	0.00	0.00	4,543.9	-465.9	405.0	-405.0	0.00	0.00	
4,700.0	0.00	0.00	4,643.9	-465.9	405.0	-405.0	0.00	0.00	
4,800.0	0.00	0.00	4,743.9	-465.9	405.0	-405.0	0.00	0.00	
4,900.0	0.00	0.00	4,843.9	-465.9	405.0	-405.0	0.00	0.00	
5,000.0	0.00	0.00	4,943.9	-465.9	405.0	-405.0	0.00	0.00	
5,100.0	0.00	0.00	5,043.9	-465.9	405.0	-405.0	0.00	0.00	
5,200.0	0.00	0.00	5,143.9	-465.9	405.0	-405.0	0.00	0.00	
5,300.0	0.00	0.00	5,243.9	-465.9	405.0	-405.0	0.00	0.00	
5,400.0	0.00	0.00	5,343.9	-465.9	405.0	-405.0	0.00	0.00	
5,500.0	0.00	0.00	5,443.9	-465.9	405.0	-405.0	0.00	0.00	
5,600.0	0.00	0.00	5,543.9	-465.9	405.0	-405.0	0.00	0.00	
5,700.0	0.00	0.00	5,643.9	-465.9	405.0	-405.0	0.00	0.00	
5,800.0	0.00	0.00	5,743.9	-465.9	405.0	-405.0	0.00	0.00	
5,900.0	0.00	0.00	5,843.9	-465.9	405.0	-405.0	0.00	0.00	
6,000.0	0.00	0.00	5,943.9	-465.9	405.0	-405.0	0.00	0.00	
6,055.1	0.00	0.00	5,999.0	-465.9	405.0	-405.0	0.00	0.00	Teepee Buttes (*if present)
6,100.0	0.00	0.00	6,043.9	-465.9	405.0	-405.0	0.00	0.00	
6,200.0	0.00	0.00	6,143.9	-465.9	405.0	-405.0	0.00	0.00	
6,300.0	0.00	0.00	6,243.9	-465.9	405.0	-405.0	0.00	0.00	
6,400.0	0.00	0.00	6,343.9	-465.9	405.0	-405.0	0.00	0.00	
6,500.0	0.00	0.00	6,443.9	-465.9	405.0	-405.0	0.00	0.00	
6,595.9	0.00	0.00	6,539.8	-465.9	405.0	-405.0	0.00	0.00	Start Build 8.00
6,600.0	0.33	270.00	6,543.9	-465.9	405.0	-405.0	8.00	8.00	
6,700.0	8.33	270.00	6,643.6	-465.9	397.5	-397.5	8.00	8.00	
6,800.0	16.33	270.00	6,741.2	-465.9	376.1	-376.1	8.00	8.00	
6,876.2	22.42	270.00	6,813.0	-465.9	350.9	-350.9	8.00	8.00	Sharon Springs
6,900.0	24.33	270.00	6,834.9	-465.9	341.4	-341.4	8.00	8.00	
6,958.4	29.00	270.00	6,887.0	-465.9	315.2	-315.2	8.00	8.00	Niobrara
7,000.0	32.33	270.00	6,922.8	-465.9	294.0	-294.0	8.00	8.00	
7,100.0	40.33	270.00	7,003.3	-465.9	234.8	-234.8	8.00	8.00	
7,130.3	42.75	270.00	7,026.0	-465.9	214.7	-214.7	8.00	8.00	B Chalk
7,168.0	45.77	270.00	7,053.0	-465.9	188.4	-188.4	8.00	8.00	B Marl
7,200.0	48.33	270.00	7,074.8	-465.9	165.0	-165.0	8.00	8.00	
7,217.1	49.70	270.00	7,086.0	-465.9	152.1	-152.1	8.00	8.00	C Chalk
7,279.1	54.66	270.00	7,124.0	-465.9	103.1	-103.1	8.00	8.00	C Marl
7,300.0	56.33	270.00	7,135.9	-465.9	85.9	-85.9	8.00	8.00	
7,400.0	64.33	270.00	7,185.3	-465.9	-0.9	0.9	8.00	8.00	
7,500.0	72.33	270.00	7,222.2	-465.9	-93.8	93.8	8.00	8.00	
7,512.9	73.36	270.00	7,226.0	-465.9	-106.0	106.0	8.00	8.00	Ft. Hayes
7,600.0	80.33	270.00	7,245.8	-465.9	-190.9	190.9	8.00	8.00	
7,601.1	80.41	270.00	7,246.0	-465.9	-191.9	191.9	8.00	8.00	Codell
7,700.0	88.33	270.00	7,255.7	-465.9	-290.3	290.3	8.00	8.00	
7,720.9	90.00	270.00	7,256.0	-465.9	-311.2	311.2	8.00	8.00	LP @ 7256' TVD; 90°
7,800.0	90.00	270.00	7,256.0	-465.9	-390.3	390.3	0.00	0.00	
7,900.0	90.00	270.00	7,256.0	-465.9	-490.3	490.3	0.00	0.00	
8,000.0	90.00	270.00	7,256.0	-465.9	-590.3	590.3	0.00	0.00	
8,100.0	90.00	270.00	7,256.0	-465.9	-690.3	690.3	0.00	0.00	
8,200.0	90.00	270.00	7,256.0	-465.9	-790.3	790.3	0.00	0.00	
8,300.0	90.00	270.00	7,256.0	-465.9	-890.3	890.3	0.00	0.00	
8,400.0	90.00	270.00	7,256.0	-465.9	-990.3	990.3	0.00	0.00	
8,500.0	90.00	270.00	7,256.0	-465.9	-1,090.3	1,090.3	0.00	0.00	
8,600.0	90.00	270.00	7,256.0	-465.9	-1,190.3	1,190.3	0.00	0.00	

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Site:	S6-T3N-R68W (Zisch/Drieth 1)	**North Reference:**	True
Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,700.0	90.00	270.00	7,256.0	-465.9	-1,290.3	1,290.3	0.00	0.00	
8,800.0	90.00	270.00	7,256.0	-465.9	-1,390.3	1,390.3	0.00	0.00	
8,900.0	90.00	270.00	7,256.0	-465.9	-1,490.3	1,490.3	0.00	0.00	
9,000.0	90.00	270.00	7,256.0	-465.9	-1,590.3	1,590.3	0.00	0.00	
9,100.0	90.00	270.00	7,256.0	-465.9	-1,690.3	1,690.3	0.00	0.00	
9,200.0	90.00	270.00	7,256.0	-465.9	-1,790.3	1,790.3	0.00	0.00	
9,300.0	90.00	270.00	7,256.0	-465.9	-1,890.3	1,890.3	0.00	0.00	
9,400.0	90.00	270.00	7,256.0	-465.9	-1,990.3	1,990.3	0.00	0.00	
9,500.0	90.00	270.00	7,256.0	-465.9	-2,090.3	2,090.3	0.00	0.00	
9,600.0	90.00	270.00	7,256.0	-465.9	-2,190.3	2,190.3	0.00	0.00	
9,700.0	90.00	270.00	7,256.0	-465.9	-2,290.3	2,290.3	0.00	0.00	
9,800.0	90.00	270.00	7,256.0	-465.9	-2,390.3	2,390.3	0.00	0.00	
9,900.0	90.00	270.00	7,256.0	-465.9	-2,490.3	2,490.3	0.00	0.00	
10,000.0	90.00	270.00	7,256.0	-465.9	-2,590.3	2,590.3	0.00	0.00	
10,100.0	90.00	270.00	7,256.0	-465.9	-2,690.3	2,690.3	0.00	0.00	
10,200.0	90.00	270.00	7,256.0	-465.9	-2,790.3	2,790.3	0.00	0.00	
10,300.0	90.00	270.00	7,256.0	-465.9	-2,890.3	2,890.3	0.00	0.00	
10,400.0	90.00	270.00	7,256.0	-465.9	-2,990.3	2,990.3	0.00	0.00	
10,500.0	90.00	270.00	7,256.0	-465.9	-3,090.3	3,090.3	0.00	0.00	
10,600.0	90.00	270.00	7,256.0	-465.9	-3,190.3	3,190.3	0.00	0.00	
10,700.0	90.00	270.00	7,256.0	-465.9	-3,290.3	3,290.3	0.00	0.00	
10,800.0	90.00	270.00	7,256.0	-465.9	-3,390.3	3,390.3	0.00	0.00	
10,900.0	90.00	270.00	7,256.0	-465.9	-3,490.3	3,490.3	0.00	0.00	
11,000.0	90.00	270.00	7,256.0	-465.9	-3,590.3	3,590.3	0.00	0.00	
11,100.0	90.00	270.00	7,256.0	-465.9	-3,690.3	3,690.3	0.00	0.00	
11,200.0	90.00	270.00	7,256.0	-465.9	-3,790.3	3,790.3	0.00	0.00	
11,300.0	90.00	270.00	7,256.0	-465.9	-3,890.3	3,890.3	0.00	0.00	
11,400.0	90.00	270.00	7,256.0	-465.9	-3,990.3	3,990.3	0.00	0.00	
11,500.0	90.00	270.00	7,256.0	-465.9	-4,090.3	4,090.3	0.00	0.00	
11,600.0	90.00	270.00	7,256.0	-465.9	-4,190.3	4,190.3	0.00	0.00	
11,679.8	90.00	270.00	7,256.0	-465.9	-4,270.1	4,270.1	0.00	0.00	TD at 11679.8 - Drieth 1D-6H PBHL

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
Drieth 1D-6H PBHL - plan hits target center - Point	0.00	0.00	7,256.0	-465.9	-4,270.1	1,337,446.17	3,124,633.52	40.258820	-105.053450

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Drieth 1D-6H-A368
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site:	S6-T3N-R68W (Zisch/Drieth 1)	**North Reference:**	True
Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
299.0	299.0	Fox Hills - BASE			
3,575.5	3,523.0	Sussex			
3,886.1	3,831.0	Sussex Marker			
4,147.9	4,092.0	Shannon			
6,055.1	5,999.0	Teepee Buttes (*if present)			
6,876.2	6,813.0	Sharon Springs			
6,958.4	6,887.0	Niobrara			
7,130.3	7,026.0	B Chalk			
7,168.0	7,053.0	B Marl			
7,217.1	7,086.0	C Chalk			
7,279.1	7,124.0	C Marl			
7,512.9	7,226.0	Ft. Hayes			
7,601.1	7,246.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.0	300.0	0.0	0.0	KOP @ 300'
1,500.0	1,491.2	-94.5	82.1	EOB; Inc=12°
3,265.0	3,217.7	-371.4	322.9	Start Drop -1.00
4,465.0	4,408.9	-465.9	405.0	EOD; Inc=0°
6,595.9	6,539.8	-465.9	405.0	Start Build 8.00
7,720.9	7,256.0	-465.9	-311.2	LP @ 7256' TVD; 90°
11,679.8	7,256.0	-465.9	-4,270.1	TD at 11679.8

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S6-T3N-R68W (Zisch/Drieth 1)
Drieth 1D-6H-A368
Hz
Plan #1

Anticollision Report

15 April, 2013

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Drieth 1D-6H-A368
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Reference Site:	S6-T3N-R68W (Zisch/Drieth 1)	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Plan #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 4/15/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,679.8	Plan #1 (Hz)	MWD	Geolink MWD

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
S6-T3N-R68W (Zisch/Drieth 1)						
Breakneck Properties 21-6 - DD - Plan #1						Out of range
Drieth 1A-6H-A368 - Hz - Plan #1	166.3	167.3	29.1	28.6	54.273	CC
Drieth 1A-6H-A368 - Hz - Plan #1	200.0	201.0	29.1	28.5	44.528	ES
Drieth 1A-6H-A368 - Hz - Plan #1	500.0	499.4	38.2	36.5	22.411	SF
Drieth 1B-6H-A368 - Hz - Plan #1	266.3	267.3	21.9	21.0	24.669	CC
Drieth 1B-6H-A368 - Hz - Plan #1	300.0	301.0	21.9	20.9	21.780	ES
Drieth 1B-6H-A368 - Hz - Plan #1	600.0	600.1	31.5	29.5	15.248	SF
Drieth 1C-6H-A368 - Hz - Plan #1	300.0	300.0	10.9	9.9	10.909	CC, ES
Drieth 1C-6H-A368 - Hz - Plan #1	11,680.6	11,433.4	413.2	225.5	2.201	SF
Drieth 1E-6H-A368 - Hz - Plan #1	200.0	200.0	10.9	10.3	16.742	CC, ES
Drieth 1E-6H-A368 - Hz - Plan #1	11,680.6	11,500.4	413.2	225.2	2.198	SF
SUMMER 6-1 (EXISTING) - EXISTING - NO SURVEYS						Out of range

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Drieth 1D-6H-A368
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Reference Site:	S6-T3N-R68W (Zisch/Drieth 1)	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S6-T3N-R68W (Zisch/Drieth 1) - Drieth 1A-6H-A368 - Hz - Plan #1

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
0.0	0.0	1.0	1.0	0.0	0.0	0.00	29.1	0.0	29.1				
100.0	100.0	101.0	101.0	0.2	0.2	0.00	29.1	0.0	29.1	28.8	0.31	95.415	
166.3	166.3	167.3	167.3	0.3	0.3	0.00	29.1	0.0	29.1	28.6	0.54	54.273	CC
200.0	200.0	201.0	201.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.65	44.528	ES
300.0	300.0	300.6	300.6	0.5	0.5	0.99	29.9	0.5	29.9	28.9	1.00	29.784	
400.0	400.0	400.0	400.0	0.7	0.7	-136.41	32.0	2.0	32.7	31.3	1.35	24.161	
500.0	500.0	499.4	499.3	0.9	0.9	-135.52	35.5	4.6	38.2	36.5	1.71	22.411	SF
600.0	599.9	598.4	598.1	1.0	1.1	-135.24	40.4	8.1	46.5	44.4	2.07	22.513	
700.0	699.7	697.1	696.5	1.2	1.3	-135.33	46.7	12.5	57.5	55.0	2.43	23.613	
800.0	799.4	795.2	794.1	1.4	1.5	-135.61	54.3	18.0	71.1	68.3	2.81	25.282	
900.0	898.9	892.7	891.1	1.7	1.7	-135.94	63.2	24.3	87.4	84.2	3.20	27.277	
1,000.0	998.3	989.6	987.1	1.9	2.0	-136.27	73.3	31.6	106.3	102.7	3.61	29.451	
1,100.0	1,097.4	1,085.6	1,082.1	2.2	2.3	-136.57	84.7	39.8	127.9	123.8	4.03	31.707	
1,200.0	1,196.3	1,180.7	1,175.9	2.5	2.6	-136.83	97.2	48.7	152.0	147.5	4.47	33.982	
1,300.0	1,294.9	1,274.8	1,268.5	2.8	2.9	-137.05	110.9	58.5	178.7	173.8	4.93	36.232	
1,400.0	1,393.3	1,367.9	1,359.8	3.1	3.3	-137.22	125.6	69.0	207.9	202.5	5.41	38.428	
1,500.0	1,491.2	1,459.8	1,449.6	3.5	3.6	-137.35	141.3	80.3	239.6	233.7	5.91	40.553	
1,600.0	1,589.1	1,550.7	1,538.2	3.9	4.0	-137.56	158.0	92.2	273.2	266.7	6.43	42.502	
1,700.0	1,686.9	1,640.7	1,625.6	4.3	4.4	-137.55	175.6	104.9	307.9	301.0	6.96	44.266	
1,800.0	1,784.7	1,731.4	1,713.2	4.7	4.8	-137.41	194.5	118.4	343.8	336.3	7.50	45.862	
1,900.0	1,882.5	1,824.6	1,803.3	5.1	5.3	-137.27	214.1	132.4	380.0	371.9	8.05	47.208	
2,000.0	1,980.3	1,917.8	1,893.3	5.5	5.7	-137.14	233.7	146.5	416.1	407.5	8.60	48.360	
2,100.0	2,078.1	2,011.1	1,983.4	5.8	6.2	-137.04	253.3	160.5	452.3	443.1	9.16	49.356	
2,200.0	2,175.9	2,104.3	2,073.4	6.2	6.6	-136.96	273.0	174.6	488.4	478.7	9.72	50.223	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Drieth 1D-6H-A368
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Reference Site:	S6-T3N-R68W (Zisch/Drieth 1)	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S6-T3N-R68W (Zisch/Drieth 1) - Drieth 1B-6H-A368 - Hz - Plan #1

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
0.0	0.0	1.0	1.0	0.0	0.0	0.00	21.9	0.0	21.9				
100.0	100.0	101.0	101.0	0.2	0.2	0.00	21.9	0.0	21.9	21.6	0.31	71.562	
200.0	200.0	201.0	201.0	0.3	0.3	0.00	21.9	0.0	21.9	21.2	0.65	33.395	
266.3	266.3	267.3	267.3	0.4	0.4	0.00	21.9	0.0	21.9	21.0	0.89	24.669	CC
300.0	300.0	301.0	301.0	0.5	0.5	0.00	21.9	0.0	21.9	20.9	1.00	21.780	ES
400.0	400.0	400.8	400.8	0.7	0.7	-138.46	22.3	0.8	22.9	21.6	1.35	16.949	
500.0	500.0	500.5	500.5	0.9	0.9	-137.19	23.5	3.1	26.2	24.4	1.71	15.326	
600.0	599.9	600.1	600.0	1.0	1.0	-135.65	25.5	6.9	31.5	29.5	2.07	15.248	SF
700.0	699.7	699.5	699.2	1.2	1.2	-134.21	28.4	12.3	39.1	36.6	2.44	16.003	
800.0	799.4	798.6	798.0	1.4	1.4	-133.01	32.0	19.1	48.8	46.0	2.83	17.225	
900.0	898.9	897.4	896.3	1.7	1.7	-132.05	36.5	27.5	60.7	57.4	3.24	18.702	
1,000.0	998.3	995.7	994.0	1.9	1.9	-131.30	41.7	37.3	74.7	71.0	3.68	20.302	
1,100.0	1,097.4	1,093.6	1,091.1	2.2	2.2	-130.69	47.6	48.5	90.8	86.6	4.14	21.941	
1,200.0	1,196.3	1,190.9	1,187.3	2.5	2.5	-130.20	54.3	61.0	109.0	104.4	4.63	23.563	
1,300.0	1,294.9	1,287.7	1,282.8	2.8	2.8	-129.80	61.7	75.0	129.3	124.2	5.15	25.133	
1,400.0	1,393.3	1,383.7	1,377.3	3.1	3.1	-129.45	69.8	90.2	151.7	146.0	5.70	26.630	
1,500.0	1,491.2	1,479.1	1,470.7	3.5	3.4	-129.14	78.6	106.7	176.2	169.9	6.28	28.041	
1,600.0	1,589.1	1,575.3	1,564.9	3.9	3.8	-128.99	88.0	124.4	201.8	194.9	6.89	29.297	
1,700.0	1,686.9	1,672.0	1,659.5	4.3	4.2	-128.87	97.4	142.1	227.5	220.0	7.50	30.314	
1,800.0	1,784.7	1,768.6	1,754.0	4.7	4.6	-128.77	106.9	159.9	253.1	245.0	8.13	31.154	
1,900.0	1,882.5	1,865.3	1,848.5	5.1	4.9	-128.69	116.3	177.6	278.8	270.0	8.75	31.855	
2,000.0	1,980.3	1,961.9	1,943.1	5.5	5.3	-128.62	125.7	195.3	304.5	295.1	9.38	32.449	
2,100.0	2,078.1	2,058.6	2,037.6	5.8	5.7	-128.56	135.2	213.1	330.1	320.1	10.02	32.957	
2,200.0	2,175.9	2,155.2	2,132.1	6.2	6.1	-128.51	144.6	230.8	355.8	345.1	10.65	33.397	
2,300.0	2,273.8	2,251.9	2,226.7	6.6	6.5	-128.47	154.0	248.6	381.5	370.2	11.29	33.780	
2,400.0	2,371.6	2,348.5	2,321.2	7.0	6.9	-128.43	163.5	266.3	407.1	395.2	11.93	34.117	
2,500.0	2,469.4	2,445.2	2,415.8	7.4	7.2	-128.40	172.9	284.1	432.8	420.2	12.58	34.416	
2,600.0	2,567.2	2,546.0	2,514.5	7.8	7.6	-128.44	182.4	302.0	458.1	444.9	13.22	34.656	
2,700.0	2,665.0	2,648.1	2,614.8	8.2	8.0	-128.64	191.3	318.6	482.3	468.5	13.85	34.837	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Drieth 1D-6H-A368
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Reference Site:	S6-T3N-R68W (Zisch/Drieth 1)	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S6-T3N-R68W (Zisch/Drieth 1) - Drieth 1C-6H-A368 - Hz - Plan #1

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
0.0	0.0	0.0	0.0	0.0	0.0	0.00	10.9	0.0	10.9				
100.0	100.0	100.0	100.0	0.2	0.2	0.00	10.9	0.0	10.9	10.6	0.30	35.986	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	10.9	0.0	10.9	10.3	0.65	16.742	
300.0	300.0	300.0	300.0	0.5	0.5	0.00	10.9	0.0	10.9	9.9	1.00	10.909	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-141.82	10.9	0.0	11.6	10.3	1.35	8.587	
500.0	500.0	500.1	500.1	0.9	0.9	-145.24	10.7	0.8	13.4	11.7	1.70	7.863	
600.0	599.9	600.1	600.1	1.0	1.0	-145.55	9.9	3.3	15.9	13.9	2.06	7.735	
700.0	699.7	700.2	700.1	1.2	1.2	-143.94	8.6	7.5	19.2	16.8	2.42	7.917	
800.0	799.4	800.2	799.9	1.4	1.4	-141.38	6.7	13.3	23.2	20.4	2.80	8.278	
900.0	898.9	900.3	899.6	1.7	1.6	-138.49	4.4	20.8	28.1	24.9	3.21	8.742	
1,000.0	998.3	1,000.2	999.1	1.9	1.8	-135.62	1.5	30.0	33.8	30.1	3.65	9.257	
1,100.0	1,097.4	1,100.1	1,098.4	2.2	2.1	-132.94	-1.9	40.7	40.4	36.3	4.13	9.788	
1,200.0	1,196.3	1,200.0	1,197.4	2.5	2.3	-130.52	-5.8	53.2	47.9	43.3	4.65	10.307	
1,300.0	1,294.9	1,299.7	1,296.0	2.8	2.6	-128.37	-10.3	67.2	56.4	51.1	5.22	10.800	
1,400.0	1,393.3	1,399.4	1,394.3	3.1	2.9	-126.47	-15.2	82.9	65.7	59.9	5.84	11.258	
1,500.0	1,491.2	1,498.8	1,492.3	3.5	3.3	-125.43	-20.4	99.4	76.1	69.6	6.48	11.737	
1,600.0	1,589.1	1,598.3	1,590.2	3.9	3.6	-125.18	-25.6	115.8	86.9	79.8	7.13	12.192	
1,700.0	1,686.9	1,697.7	1,688.1	4.3	3.9	-124.99	-30.8	132.3	97.8	90.0	7.79	12.557	
1,800.0	1,784.7	1,797.1	1,786.0	4.7	4.3	-124.83	-36.0	148.8	108.7	100.2	8.45	12.855	
1,900.0	1,882.5	1,896.5	1,883.9	5.1	4.6	-124.71	-41.2	165.2	119.6	110.4	9.13	13.101	
2,000.0	1,980.3	1,995.9	1,981.8	5.5	4.9	-124.60	-46.4	181.7	130.4	120.6	9.80	13.308	
2,100.0	2,078.1	2,095.3	2,079.7	5.8	5.3	-124.51	-51.6	198.2	141.3	130.8	10.48	13.484	
2,200.0	2,175.9	2,194.7	2,177.6	6.2	5.6	-124.44	-56.7	214.6	152.2	141.0	11.16	13.635	
2,300.0	2,273.8	2,294.1	2,275.4	6.6	6.0	-124.37	-61.9	231.1	163.0	151.2	11.84	13.766	
2,400.0	2,371.6	2,393.5	2,373.3	7.0	6.3	-124.31	-67.1	247.6	173.9	161.4	12.53	13.881	
2,500.0	2,469.4	2,492.9	2,471.2	7.4	6.6	-124.26	-72.3	264.0	184.8	171.6	13.22	13.982	
2,600.0	2,567.2	2,592.3	2,569.1	7.8	7.0	-124.22	-77.5	280.5	195.7	181.8	13.90	14.072	
2,700.0	2,665.0	2,691.7	2,667.0	8.2	7.3	-124.18	-82.7	296.9	206.5	191.9	14.59	14.152	
2,800.0	2,762.8	2,791.1	2,764.9	8.6	7.7	-124.14	-87.9	313.4	217.4	202.1	15.28	14.224	
2,900.0	2,860.7	2,890.4	2,862.8	9.0	8.0	-124.19	-93.0	329.5	228.3	212.3	15.96	14.303	
3,000.0	2,958.5	2,989.5	2,960.7	9.4	8.3	-124.61	-97.6	344.2	239.3	222.7	16.58	14.429	
3,100.0	3,056.3	3,088.6	3,058.8	9.8	8.6	-125.39	-101.7	357.2	250.4	233.2	17.15	14.597	
3,200.0	3,154.1	3,187.4	3,156.9	10.2	8.9	-126.48	-105.3	368.5	261.7	244.1	17.67	14.812	
3,300.0	3,251.9	3,286.1	3,255.0	10.6	9.1	-127.84	-108.3	378.3	273.3	255.1	18.13	15.074	
3,400.0	3,350.0	3,384.6	3,353.2	11.0	9.3	-129.28	-110.9	386.4	284.3	265.8	18.53	15.347	
3,500.0	3,448.5	3,483.1	3,451.4	11.4	9.5	-130.67	-112.9	392.8	294.7	275.8	18.88	15.613	
3,600.0	3,547.2	3,581.5	3,549.7	11.7	9.7	-132.04	-114.5	397.7	304.4	285.2	19.17	15.874	
3,700.0	3,646.2	3,679.8	3,647.9	12.0	9.8	-133.39	-115.5	401.0	313.3	293.9	19.42	16.132	
3,800.0	3,745.4	3,778.0	3,746.1	12.2	9.9	-134.74	-116.0	402.6	321.6	302.0	19.63	16.388	
3,900.0	3,844.8	3,876.7	3,844.8	12.5	10.1	-136.06	-116.1	402.9	329.2	309.4	19.80	16.628	
4,000.0	3,944.4	3,976.3	3,944.4	12.7	10.2	-137.17	-116.1	402.9	335.8	315.8	19.98	16.806	
4,100.0	4,044.2	4,076.0	4,044.2	12.9	10.3	-138.03	-116.1	402.9	341.1	320.9	20.17	16.911	
4,200.0	4,144.0	4,175.9	4,144.0	13.0	10.4	-138.66	-116.1	402.9	345.2	324.9	20.38	16.942	
4,300.0	4,243.9	4,275.8	4,243.9	13.2	10.5	-139.09	-116.1	402.9	348.1	327.5	20.59	16.900	
4,400.0	4,343.9	4,375.8	4,343.9	13.3	10.7	-139.32	-116.1	402.9	349.6	328.7	20.82	16.786	
4,500.0	4,443.9	4,475.8	4,443.9	13.4	10.8	-0.36	-116.1	402.9	349.9	330.4	19.46	17.977	
4,600.0	4,543.9	4,575.8	4,543.9	13.5	10.9	-0.36	-116.1	402.9	349.9	330.1	19.75	17.714	
4,700.0	4,643.9	4,675.8	4,643.9	13.6	11.0	-0.36	-116.1	402.9	349.9	329.8	20.04	17.457	
4,800.0	4,743.9	4,775.8	4,743.9	13.7	11.2	-0.36	-116.1	402.9	349.9	329.5	20.33	17.206	
4,900.0	4,843.9	4,875.8	4,843.9	13.8	11.3	-0.36	-116.1	402.9	349.9	329.2	20.63	16.961	
5,000.0	4,943.9	4,975.8	4,943.9	13.9	11.4	-0.36	-116.1	402.9	349.9	328.9	20.92	16.722	
5,100.0	5,043.9	5,075.8	5,043.9	14.0	11.6	-0.36	-116.1	402.9	349.9	328.6	21.22	16.488	

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 Drieth 1D-6H-A368
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Reference Site:	S6-T3N-R68W (Zisch/Drieth 1)	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S6-T3N-R68W (Zisch/Drieth 1) - Drieth 1C-6H-A368 - Hz - Plan #1

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
5,200.0	5,143.9	5,175.8	5,143.9	14.1	11.7	-0.36	-116.1	402.9	349.9	328.3	21.52	16.260	
5,300.0	5,243.9	5,275.8	5,243.9	14.2	11.8	-0.36	-116.1	402.9	349.9	328.0	21.82	16.037	
5,400.0	5,343.9	5,375.8	5,343.9	14.4	12.0	-0.36	-116.1	402.9	349.9	327.7	22.12	15.819	
5,500.0	5,443.9	5,475.8	5,443.9	14.5	12.1	-0.36	-116.1	402.9	349.9	327.4	22.42	15.606	
5,600.0	5,543.9	5,575.8	5,543.9	14.6	12.2	-0.36	-116.1	402.9	349.9	327.1	22.72	15.398	
5,700.0	5,643.9	5,675.8	5,643.9	14.7	12.4	-0.36	-116.1	402.9	349.9	326.8	23.02	15.195	
5,800.0	5,743.9	5,775.8	5,743.9	14.8	12.5	-0.36	-116.1	402.9	349.9	326.5	23.33	14.996	
5,900.0	5,843.9	5,875.8	5,843.9	14.9	12.7	-0.36	-116.1	402.9	349.9	326.2	23.64	14.802	
6,000.0	5,943.9	5,975.8	5,943.9	15.1	12.8	-0.36	-116.1	402.9	349.9	325.9	23.94	14.612	
6,100.0	6,043.9	6,075.8	6,043.9	15.2	12.9	-0.36	-116.1	402.9	349.9	325.6	24.25	14.426	
6,200.0	6,143.9	6,175.8	6,143.9	15.3	13.1	-0.36	-116.1	402.9	349.9	325.3	24.56	14.244	
6,300.0	6,243.9	6,275.8	6,243.9	15.4	13.2	-0.36	-116.1	402.9	349.9	325.0	24.87	14.067	
6,357.1	6,301.1	6,332.9	6,301.1	15.5	13.3	-0.36	-116.1	402.9	349.9	324.8	25.05	13.967	
6,400.0	6,343.9	6,375.7	6,343.8	15.6	13.4	-0.42	-116.1	402.5	349.9	324.7	25.19	13.890	
6,500.0	6,443.9	6,474.2	6,441.7	15.7	13.4	-2.07	-116.1	392.4	350.1	324.4	25.66	13.645	
6,600.0	6,543.9	6,568.3	6,533.1	15.8	13.3	84.33	-116.1	370.4	351.7	325.7	26.07	13.492	
6,700.0	6,643.6	6,657.8	6,616.7	15.9	13.1	79.90	-116.1	338.4	355.8	330.2	25.57	13.918	
6,800.0	6,741.2	6,744.6	6,693.3	15.8	13.0	75.78	-116.1	297.8	361.7	336.7	25.03	14.453	
6,900.0	6,834.9	6,829.0	6,762.6	15.7	12.8	72.03	-116.1	249.6	368.8	344.3	24.54	15.029	
7,000.0	6,922.8	6,911.6	6,824.4	15.5	12.6	68.70	-116.1	194.9	376.7	352.5	24.19	15.575	
7,100.0	7,003.3	6,992.6	6,878.5	15.3	12.6	65.82	-116.1	134.7	384.7	360.7	24.02	16.018	
7,200.0	7,074.8	7,072.2	6,924.8	15.2	12.7	63.39	-116.1	70.0	392.3	368.2	24.11	16.274	
7,300.0	7,135.9	7,150.0	6,962.8	15.2	13.1	61.43	-116.1	2.1	399.2	374.7	24.46	16.319	
7,400.0	7,185.3	7,228.6	6,993.5	15.3	13.7	59.88	-116.1	-70.2	405.0	379.7	25.21	16.062	
7,500.0	7,222.2	7,305.7	7,015.7	15.8	14.6	58.78	-116.1	-144.0	409.3	383.0	26.34	15.543	
7,600.0	7,245.8	7,382.5	7,029.8	16.7	15.6	58.10	-116.1	-219.4	412.1	384.3	27.87	14.787	
7,700.0	7,255.7	7,459.0	7,035.8	18.1	16.8	57.84	-116.1	-295.7	413.2	383.5	29.78	13.875	
7,800.0	7,256.0	7,553.6	7,036.0	19.7	18.5	57.83	-116.1	-390.3	413.3	380.7	32.56	12.693	
7,900.0	7,256.0	7,653.6	7,036.0	21.5	20.3	57.83	-116.1	-490.3	413.2	377.5	35.71	11.571	
8,000.0	7,256.0	7,753.6	7,036.0	23.4	22.3	57.83	-116.1	-590.3	413.2	374.2	39.07	10.578	
8,100.0	7,256.0	7,853.6	7,036.0	25.5	24.4	57.83	-116.1	-690.3	413.2	370.7	42.57	9.707	
8,200.0	7,256.0	7,953.6	7,036.0	27.5	26.6	57.83	-116.1	-790.3	413.2	367.1	46.19	8.947	
8,300.0	7,256.0	8,053.6	7,036.0	29.7	28.8	57.83	-116.1	-890.3	413.2	363.3	49.90	8.282	
8,400.0	7,256.0	8,153.6	7,036.0	31.9	31.0	57.83	-116.1	-990.3	413.2	359.6	53.68	7.698	
8,500.0	7,256.0	8,253.6	7,036.0	34.1	33.3	57.83	-116.1	-1,090.3	413.2	355.7	57.52	7.185	
8,600.0	7,256.0	8,353.6	7,036.0	36.4	35.6	57.83	-116.1	-1,190.3	413.2	351.8	61.40	6.730	
8,700.0	7,256.0	8,453.6	7,036.0	38.7	37.9	57.83	-116.1	-1,290.3	413.2	347.9	65.32	6.326	
8,800.0	7,256.0	8,553.6	7,036.0	41.0	40.3	57.83	-116.1	-1,390.3	413.2	343.9	69.28	5.965	
8,900.0	7,256.0	8,653.6	7,036.0	43.3	42.6	57.83	-116.1	-1,490.3	413.2	340.0	73.26	5.641	
9,000.0	7,256.0	8,753.6	7,036.0	45.7	45.0	57.83	-116.1	-1,590.3	413.2	336.0	77.26	5.348	
9,100.0	7,256.0	8,853.6	7,036.0	48.0	47.4	57.83	-116.1	-1,690.3	413.2	331.9	81.29	5.083	
9,200.0	7,256.0	8,953.6	7,036.0	50.4	49.8	57.83	-116.1	-1,790.3	413.2	327.9	85.33	4.843	
9,300.0	7,256.0	9,053.6	7,036.0	52.8	52.2	57.83	-116.1	-1,890.3	413.2	323.8	89.38	4.623	
9,400.0	7,256.0	9,153.6	7,036.0	55.2	54.6	57.83	-116.1	-1,990.3	413.2	319.8	93.45	4.422	
9,500.0	7,256.0	9,253.6	7,036.0	57.6	57.0	57.83	-116.1	-2,090.3	413.2	315.7	97.52	4.237	
9,600.0	7,256.0	9,353.6	7,036.0	60.0	59.4	57.83	-116.1	-2,190.3	413.2	311.6	101.61	4.067	
9,700.0	7,256.0	9,453.6	7,036.0	62.4	61.8	57.83	-116.2	-2,290.3	413.2	307.5	105.71	3.909	
9,800.0	7,256.0	9,553.6	7,036.0	64.8	64.2	57.83	-116.2	-2,390.3	413.2	303.4	109.81	3.763	
9,900.0	7,256.0	9,653.6	7,036.0	67.2	66.7	57.83	-116.2	-2,490.3	413.2	299.3	113.92	3.627	
10,000.0	7,256.0	9,753.6	7,036.0	69.6	69.1	57.83	-116.2	-2,590.3	413.2	295.2	118.03	3.501	
10,100.0	7,256.0	9,853.6	7,036.0	72.0	71.5	57.83	-116.2	-2,690.3	413.2	291.0	122.15	3.383	
10,200.0	7,256.0	9,953.6	7,036.0	74.5	74.0	57.83	-116.2	-2,790.3	413.2	286.9	126.28	3.272	

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 Drieth 1D-6H-A368
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Reference Site:	S6-T3N-R68W (Zisch/Drieth 1)	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S6-T3N-R68W (Zisch/Drieth 1) - Drieth 1C-6H-A368 - Hz - Plan #1

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
10,300.0	7,256.0	10,053.6	7,036.0	76.9	76.4	57.83	-116.2	-2,890.3	413.2	282.8	130.41	3.168	
10,400.0	7,256.0	10,153.6	7,036.0	79.3	78.8	57.83	-116.2	-2,990.3	413.2	278.6	134.54	3.071	
10,500.0	7,256.0	10,253.6	7,036.0	81.8	81.3	57.83	-116.2	-3,090.3	413.2	274.5	138.68	2.979	
10,600.0	7,256.0	10,353.6	7,036.0	84.2	83.7	57.83	-116.2	-3,190.3	413.2	270.4	142.82	2.893	
10,700.0	7,256.0	10,453.6	7,036.0	86.6	86.2	57.83	-116.2	-3,290.3	413.2	266.2	146.96	2.811	
10,800.0	7,256.0	10,553.6	7,036.0	89.1	88.6	57.83	-116.2	-3,390.3	413.2	262.1	151.11	2.734	
10,900.0	7,256.0	10,653.6	7,036.0	91.5	91.1	57.83	-116.2	-3,490.3	413.2	257.9	155.26	2.661	
11,000.0	7,256.0	10,753.6	7,036.0	94.0	93.5	57.83	-116.2	-3,590.3	413.2	253.8	159.41	2.592	
11,100.0	7,256.0	10,853.6	7,036.0	96.4	96.0	57.83	-116.2	-3,690.3	413.2	249.6	163.56	2.526	
11,200.0	7,256.0	10,953.6	7,036.0	98.9	98.4	57.83	-116.2	-3,790.3	413.2	245.5	167.72	2.464	
11,300.0	7,256.0	11,053.6	7,036.0	101.3	100.9	57.83	-116.2	-3,890.3	413.2	241.3	171.87	2.404	
11,400.0	7,256.0	11,153.6	7,036.0	103.8	103.4	57.83	-116.2	-3,990.3	413.2	237.1	176.03	2.347	
11,500.0	7,256.0	11,253.6	7,036.0	106.2	105.8	57.83	-116.2	-4,090.3	413.2	233.0	180.19	2.293	
11,600.0	7,256.0	11,353.6	7,036.0	108.7	108.3	57.83	-116.2	-4,190.3	413.2	228.8	184.36	2.241	
11,658.9	7,256.0	11,412.5	7,036.0	110.1	109.7	57.83	-116.2	-4,249.2	413.2	226.4	186.81	2.212	
11,680.6	7,256.0	11,433.4	7,036.0	110.6	110.2	57.83	-116.2	-4,270.0	413.2	225.5	187.69	2.201	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Drieth 1D-6H-A368
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Reference Site:	S6-T3N-R68W (Zisch/Drieth 1)	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S6-T3N-R68W (Zisch/Drieth 1) - Drieth 1E-6H-A368 - Hz - Plan #1

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
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-10.9	0.0	10.9				
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-10.9	0.0	10.9	10.6	0.30	35.986	
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-10.9	0.0	10.9	10.3	0.65	16.742	CC, ES
300.0	300.0	299.8	299.8	0.5	0.5	178.10	-11.7	0.4	11.7	10.7	1.00	11.687	
400.0	400.0	399.6	399.6	0.7	0.7	36.78	-14.0	1.6	13.4	12.1	1.35	9.932	
500.0	500.0	499.4	499.2	0.9	0.9	36.43	-17.9	3.5	15.4	13.6	1.70	9.013	
600.0	599.9	599.1	598.7	1.0	1.1	37.41	-23.4	6.2	17.5	15.4	2.06	8.492	
700.0	699.7	698.7	698.1	1.2	1.3	39.26	-30.3	9.7	19.9	17.4	2.43	8.188	
800.0	799.4	798.4	797.3	1.4	1.5	41.63	-38.8	14.0	22.5	19.7	2.81	8.010	
900.0	898.9	898.0	896.2	1.7	1.8	44.30	-48.9	19.0	25.4	22.2	3.21	7.908	
1,000.0	998.3	997.5	994.9	1.9	2.0	47.09	-60.5	24.8	28.6	25.0	3.65	7.847	
1,100.0	1,097.4	1,097.0	1,093.3	2.2	2.3	49.88	-73.6	31.4	32.2	28.1	4.12	7.806	
1,200.0	1,196.3	1,196.4	1,191.4	2.5	2.7	52.59	-88.2	38.7	36.1	31.5	4.65	7.771	
1,300.0	1,294.9	1,295.8	1,289.1	2.8	3.0	55.18	-104.3	46.8	40.4	35.2	5.22	7.737	
1,400.0	1,393.3	1,395.1	1,386.5	3.1	3.4	57.61	-122.0	55.6	45.1	39.3	5.86	7.700	
1,500.0	1,491.2	1,494.4	1,483.4	3.5	3.8	59.88	-141.1	65.2	50.2	43.7	6.56	7.659	
1,600.0	1,589.1	1,593.6	1,579.9	3.9	4.2	61.25	-161.7	75.5	56.1	48.9	7.27	7.722	
1,700.0	1,686.9	1,692.6	1,675.8	4.3	4.7	61.19	-183.8	86.6	63.2	55.3	7.96	7.947	
1,800.0	1,784.7	1,792.3	1,772.0	4.7	5.1	60.56	-206.8	98.1	71.0	62.4	8.62	8.235	
1,900.0	1,882.5	1,892.0	1,868.3	5.1	5.6	60.05	-229.9	109.7	78.8	69.5	9.30	8.478	
2,000.0	1,980.3	1,991.7	1,964.6	5.5	6.1	59.63	-253.0	121.2	86.6	76.6	9.97	8.687	
2,100.0	2,078.1	2,091.3	2,060.9	5.8	6.5	59.28	-276.1	132.8	94.4	83.8	10.65	8.867	
2,200.0	2,175.9	2,191.0	2,157.2	6.2	7.0	58.98	-299.1	144.3	102.2	90.9	11.33	9.025	
2,300.0	2,273.8	2,290.7	2,253.5	6.6	7.5	58.73	-322.2	155.9	110.0	98.0	12.01	9.163	
2,400.0	2,371.6	2,390.4	2,349.8	7.0	8.0	58.51	-345.3	167.4	117.8	105.1	12.69	9.285	
2,500.0	2,469.4	2,490.1	2,446.1	7.4	8.4	58.32	-368.3	179.0	125.6	112.3	13.37	9.395	
2,600.0	2,567.2	2,589.8	2,542.4	7.8	8.9	58.15	-391.4	190.5	133.4	119.4	14.06	9.493	
2,700.0	2,665.0	2,689.5	2,638.7	8.2	9.4	58.00	-414.5	202.1	141.2	126.5	14.74	9.581	
2,800.0	2,762.8	2,789.2	2,735.0	8.6	9.9	57.86	-437.6	213.6	149.1	133.6	15.43	9.661	
2,900.0	2,860.7	2,888.9	2,831.3	9.0	10.3	57.74	-460.6	225.2	156.9	140.8	16.12	9.734	
3,000.0	2,958.5	2,988.6	2,927.6	9.4	10.8	57.63	-483.7	236.7	164.7	147.9	16.80	9.800	
3,100.0	3,056.3	3,088.3	3,023.9	9.8	11.3	57.53	-506.8	248.3	172.5	155.0	17.49	9.861	
3,200.0	3,154.1	3,188.0	3,120.2	10.2	11.8	57.44	-529.8	259.9	180.3	162.1	18.18	9.918	
3,300.0	3,251.9	3,287.7	3,216.5	10.6	12.3	57.35	-552.9	271.4	188.2	169.3	18.87	9.975	
3,400.0	3,350.0	3,387.3	3,312.7	11.0	12.8	56.98	-576.0	283.0	196.8	177.3	19.47	10.108	
3,500.0	3,448.5	3,486.8	3,408.8	11.4	13.2	56.25	-599.0	294.5	206.4	186.4	19.98	10.332	
3,600.0	3,547.2	3,586.1	3,504.8	11.7	13.7	55.22	-622.0	306.0	217.0	196.6	20.39	10.644	
3,700.0	3,646.2	3,685.8	3,601.1	12.0	14.2	53.94	-645.0	317.5	228.7	208.0	20.71	11.043	
3,800.0	3,745.4	3,788.2	3,700.2	12.2	14.7	52.60	-667.7	328.9	240.7	219.7	20.97	11.477	
3,900.0	3,844.8	3,890.8	3,800.1	12.5	15.1	51.32	-688.8	339.5	252.4	231.2	21.19	11.914	
4,000.0	3,944.4	3,993.7	3,900.7	12.7	15.5	50.09	-708.4	349.3	264.0	242.6	21.37	12.353	
4,100.0	4,044.2	4,096.9	4,001.9	12.9	15.9	48.90	-726.4	358.3	275.3	253.8	21.52	12.795	
4,200.0	4,144.0	4,200.3	4,103.7	13.0	16.2	47.75	-742.8	366.5	286.4	264.8	21.63	13.242	
4,300.0	4,243.9	4,304.0	4,206.0	13.2	16.6	46.62	-757.6	373.9	297.3	275.6	21.71	13.693	
4,400.0	4,343.9	4,407.9	4,308.9	13.3	16.9	45.51	-770.7	380.5	308.0	286.3	21.77	14.150	
4,500.0	4,443.9	4,512.1	4,412.3	13.4	17.1	-176.60	-782.2	386.2	318.4	292.1	26.36	12.081	
4,600.0	4,543.9	4,616.7	4,516.3	13.5	17.4	-177.57	-792.1	391.2	327.6	300.7	26.91	12.176	
4,700.0	4,643.9	4,721.6	4,620.8	13.6	17.6	-178.33	-800.3	395.3	335.3	307.9	27.39	12.242	
4,800.0	4,743.9	4,826.9	4,725.8	13.7	17.8	-178.91	-806.8	398.5	341.4	313.6	27.81	12.277	
4,900.0	4,843.9	4,932.4	4,831.2	13.8	17.9	-179.32	-811.6	400.9	345.9	317.7	28.17	12.279	
5,000.0	4,943.9	5,038.0	4,936.8	13.9	18.1	-179.58	-814.6	402.5	348.8	320.3	28.47	12.248	
5,100.0	5,043.9	5,143.8	5,042.5	14.0	18.2	-179.68	-815.9	403.1	350.0	321.3	28.73	12.181	

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 Drieth 1D-6H-A368
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Reference Site:	S6-T3N-R68W (Zisch/Drieth 1)	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S6-T3N-R68W (Zisch/Drieth 1) - Drieth 1E-6H-A368 - Hz - Plan #1

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
5,200.0	5,143.9	5,245.2	5,143.9	14.1	18.2	-179.69	-816.0	403.1	350.0	321.1	28.96	12.088	
5,300.0	5,243.9	5,345.2	5,243.9	14.2	18.3	-179.69	-816.0	403.1	350.0	320.9	29.18	11.995	
5,400.0	5,343.9	5,445.2	5,343.9	14.4	18.4	-179.69	-816.0	403.1	350.0	320.6	29.41	11.901	
5,500.0	5,443.9	5,545.2	5,443.9	14.5	18.5	-179.69	-816.0	403.1	350.0	320.4	29.64	11.809	
5,600.0	5,543.9	5,645.2	5,543.9	14.6	18.6	-179.69	-816.0	403.1	350.0	320.2	29.87	11.717	
5,700.0	5,643.9	5,745.2	5,643.9	14.7	18.7	-179.69	-816.0	403.1	350.0	319.9	30.11	11.625	
5,800.0	5,743.9	5,845.2	5,743.9	14.8	18.8	-179.69	-816.0	403.1	350.0	319.7	30.35	11.535	
5,900.0	5,843.9	5,945.2	5,843.9	14.9	18.9	-179.69	-816.0	403.1	350.0	319.4	30.59	11.444	
6,000.0	5,943.9	6,045.2	5,943.9	15.1	19.0	-179.69	-816.0	403.1	350.0	319.2	30.83	11.355	
6,100.0	6,043.9	6,145.2	6,043.9	15.2	19.1	-179.69	-816.0	403.1	350.0	319.0	31.07	11.266	
6,200.0	6,143.9	6,245.2	6,143.9	15.3	19.2	-179.69	-816.0	403.1	350.0	318.7	31.32	11.178	
6,300.0	6,243.9	6,345.2	6,243.9	15.4	19.3	-179.69	-816.0	403.1	350.0	318.5	31.56	11.090	
6,357.3	6,301.2	6,402.5	6,301.2	15.5	19.3	-179.69	-816.0	403.1	350.0	318.3	31.70	11.041	
6,400.0	6,343.9	6,445.1	6,343.8	15.6	19.4	-179.62	-816.0	402.7	350.0	318.2	31.80	11.008	
6,500.0	6,443.9	6,543.7	6,441.8	15.7	19.4	-177.98	-816.0	392.7	350.3	318.5	31.77	11.025	
6,600.0	6,543.9	6,637.8	6,533.2	15.8	19.3	-84.37	-816.0	370.6	351.9	324.1	27.81	12.652	
6,700.0	6,643.6	6,727.3	6,616.8	15.9	19.2	-79.94	-816.0	338.7	355.9	327.4	28.52	12.481	
6,800.0	6,741.2	6,814.1	6,693.4	15.8	19.1	-75.82	-816.0	298.0	361.8	333.0	28.82	12.554	
6,900.0	6,834.9	6,900.0	6,763.8	15.7	19.0	-72.02	-816.0	248.9	369.0	340.3	28.69	12.860	
7,000.0	6,922.8	6,981.2	6,824.5	15.5	18.9	-68.74	-816.0	195.1	376.8	348.6	28.17	13.376	
7,100.0	7,003.3	7,062.2	6,878.6	15.3	18.8	-65.86	-815.9	134.9	384.8	357.4	27.39	14.047	
7,200.0	7,074.8	7,141.8	6,924.9	15.2	18.8	-63.43	-815.9	70.1	392.4	365.8	26.56	14.776	
7,300.0	7,135.9	7,220.4	6,963.2	15.2	18.9	-61.45	-815.9	1.5	399.3	373.3	25.98	15.372	
7,400.0	7,185.3	7,300.0	6,994.1	15.3	19.1	-59.88	-815.9	-71.8	405.1	379.2	25.87	15.657	
7,500.0	7,222.2	7,375.4	7,015.7	15.8	19.5	-58.80	-815.9	-144.0	409.4	382.9	26.57	15.409	
7,600.0	7,245.8	7,450.0	7,029.6	16.7	20.0	-58.13	-815.9	-217.3	412.3	384.1	28.15	14.645	
7,700.0	7,255.7	7,528.7	7,035.8	18.1	20.7	-57.85	-815.9	-295.7	413.4	382.7	30.67	13.480	
7,800.0	7,256.0	7,623.3	7,036.0	19.7	21.9	-57.85	-815.9	-390.3	413.4	379.8	33.55	12.320	
7,900.0	7,256.0	7,723.3	7,036.0	21.5	23.4	-57.85	-815.9	-490.3	413.4	376.7	36.65	11.278	
8,000.0	7,256.0	7,823.3	7,036.0	23.4	25.1	-57.84	-815.9	-590.3	413.4	373.4	39.95	10.347	
8,100.0	7,256.0	7,923.3	7,036.0	25.5	26.9	-57.84	-815.9	-690.3	413.4	370.0	43.41	9.523	
8,200.0	7,256.0	8,023.3	7,036.0	27.5	28.9	-57.84	-815.9	-790.3	413.4	366.4	46.98	8.798	
8,300.0	7,256.0	8,123.3	7,036.0	29.7	30.9	-57.84	-815.9	-890.3	413.4	362.7	50.65	8.161	
8,400.0	7,256.0	8,223.3	7,036.0	31.9	33.0	-57.84	-815.9	-990.3	413.3	358.9	54.40	7.598	
8,500.0	7,256.0	8,323.3	7,036.0	34.1	35.2	-57.84	-815.9	-1,090.3	413.3	355.1	58.21	7.101	
8,600.0	7,256.0	8,423.3	7,036.0	36.4	37.4	-57.84	-815.9	-1,190.3	413.3	351.3	62.06	6.660	
8,700.0	7,256.0	8,523.3	7,036.0	38.7	39.6	-57.84	-815.8	-1,290.3	413.3	347.4	65.96	6.266	
8,800.0	7,256.0	8,623.3	7,036.0	41.0	41.9	-57.84	-815.8	-1,390.3	413.3	343.4	69.90	5.913	
8,900.0	7,256.0	8,723.3	7,036.0	43.3	44.1	-57.84	-815.8	-1,490.3	413.3	339.5	73.86	5.596	
9,000.0	7,256.0	8,823.3	7,036.0	45.7	46.4	-57.84	-815.8	-1,590.3	413.3	335.5	77.84	5.310	
9,100.0	7,256.0	8,923.3	7,036.0	48.0	48.8	-57.84	-815.8	-1,690.3	413.3	331.5	81.85	5.050	
9,200.0	7,256.0	9,023.3	7,036.0	50.4	51.1	-57.84	-815.8	-1,790.3	413.3	327.4	85.87	4.813	
9,300.0	7,256.0	9,123.3	7,036.0	52.8	53.5	-57.84	-815.8	-1,890.3	413.3	323.4	89.91	4.597	
9,400.0	7,256.0	9,223.3	7,036.0	55.2	55.8	-57.84	-815.8	-1,990.3	413.3	319.3	93.97	4.398	
9,500.0	7,256.0	9,323.3	7,036.0	57.6	58.2	-57.84	-815.8	-2,090.3	413.3	315.3	98.03	4.216	
9,600.0	7,256.0	9,423.3	7,036.0	60.0	60.6	-57.84	-815.8	-2,190.3	413.3	311.2	102.11	4.047	
9,700.0	7,256.0	9,523.3	7,036.0	62.4	62.9	-57.84	-815.8	-2,290.3	413.3	307.1	106.19	3.892	
9,800.0	7,256.0	9,623.3	7,036.0	64.8	65.3	-57.84	-815.8	-2,390.3	413.3	303.0	110.29	3.747	
9,900.0	7,256.0	9,723.3	7,036.0	67.2	67.7	-57.84	-815.8	-2,490.3	413.3	298.9	114.39	3.613	
10,000.0	7,256.0	9,823.3	7,036.0	69.6	70.1	-57.84	-815.7	-2,590.3	413.3	294.8	118.49	3.488	
10,100.0	7,256.0	9,923.3	7,036.0	72.0	72.5	-57.83	-815.7	-2,690.3	413.2	290.6	122.61	3.371	
10,200.0	7,256.0	10,023.3	7,036.0	74.5	75.0	-57.83	-815.7	-2,790.3	413.2	286.5	126.72	3.261	

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 Drieth 1D-6H-A368
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Reference Site:	S6-T3N-R68W (Zisch/Drieth 1)	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S6-T3N-R68W (Zisch/Drieth 1) - Drieth 1E-6H-A368 - Hz - Plan #1

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
10,300.0	7,256.0	10,123.3	7,036.0	76.9	77.4	-57.83	-815.7	-2,890.3	413.2	282.4	130.85	3.158	
10,400.0	7,256.0	10,223.3	7,036.0	79.3	79.8	-57.83	-815.7	-2,990.3	413.2	278.3	134.97	3.062	
10,500.0	7,256.0	10,323.3	7,036.0	81.8	82.2	-57.83	-815.7	-3,090.3	413.2	274.1	139.11	2.971	
10,600.0	7,256.0	10,423.3	7,036.0	84.2	84.6	-57.83	-815.7	-3,190.3	413.2	270.0	143.24	2.885	
10,700.0	7,256.0	10,523.3	7,036.0	86.6	87.1	-57.83	-815.7	-3,290.3	413.2	265.8	147.38	2.804	
10,800.0	7,256.0	10,623.3	7,036.0	89.1	89.5	-57.83	-815.7	-3,390.3	413.2	261.7	151.52	2.727	
10,900.0	7,256.0	10,723.3	7,036.0	91.5	91.9	-57.83	-815.7	-3,490.3	413.2	257.5	155.66	2.654	
11,000.0	7,256.0	10,823.3	7,036.0	94.0	94.4	-57.83	-815.7	-3,590.3	413.2	253.4	159.81	2.586	
11,100.0	7,256.0	10,923.3	7,036.0	96.4	96.8	-57.83	-815.7	-3,690.3	413.2	249.2	163.96	2.520	
11,200.0	7,256.0	11,023.3	7,036.0	98.9	99.3	-57.83	-815.7	-3,790.3	413.2	245.1	168.11	2.458	
11,300.0	7,256.0	11,123.3	7,036.0	101.3	101.7	-57.83	-815.7	-3,890.3	413.2	240.9	172.26	2.399	
11,400.0	7,256.0	11,223.3	7,036.0	103.8	104.1	-57.83	-815.6	-3,990.3	413.2	236.8	176.42	2.342	
11,500.0	7,256.0	11,323.3	7,036.0	106.2	106.6	-57.83	-815.6	-4,090.3	413.2	232.6	180.57	2.288	
11,600.0	7,256.0	11,423.3	7,036.0	108.7	109.0	-57.83	-815.6	-4,190.3	413.2	228.4	184.73	2.237	
11,657.8	7,256.0	11,481.1	7,036.0	110.1	110.4	-57.83	-815.6	-4,248.1	413.2	226.0	187.13	2.208	
11,680.6	7,256.0	11,500.4	7,036.0	110.6	110.9	-57.83	-815.6	-4,267.4	413.2	225.2	188.01	2.198	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Drieth 1D-6H-A368
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Reference Site:	S6-T3N-R68W (Zisch/Drieth 1)	**MD Reference:**	WELL @ 5099.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Drieth 1D-6H-A368	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5099.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Drieth 1D-6H-A368
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.30°