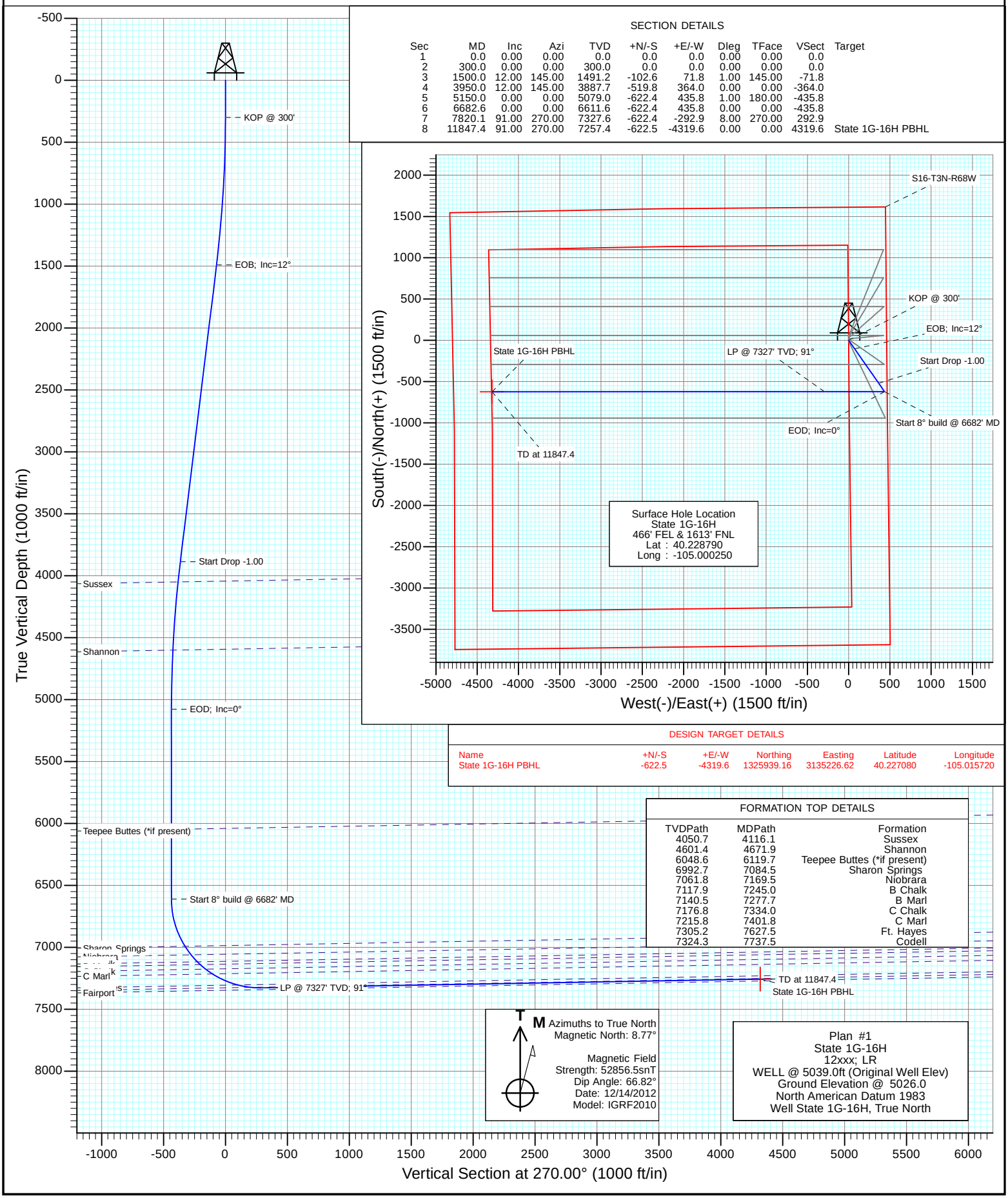
encana

Project: DJ Wattenberg
Site: S16-T3N-R68W (State)
Well: State 1G-16H
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	145.00	1491.2	-102.6	71.8	1.00	145.00	-71.8	
4	3950.0	12.00	145.00	3887.7	-519.8	364.0	0.00	0.00	-364.0	
5	5150.0	0.00	0.00	5079.0	-622.4	435.8	1.00	180.00	-435.8	
6	6682.6	0.00	0.00	6611.6	-622.4	435.8	0.00	0.00	-435.8	
7	7820.1	91.00	270.00	7327.6	-622.4	-292.9	8.00	270.00	292.9	
8	11847.4	91.00	270.00	7257.4	-622.5	-4319.6	0.00	0.00	4319.6	State 1G-16H PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
State 1G-16H PBHL	-622.5	-4319.6	1325939.16	3135226.62	40.227080	-105.015720

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4050.7	4116.1	Sussex
4601.4	4671.9	Shannon
6048.6	6119.7	Teepee Buttes (*if present)
6992.7	7084.5	Sharon Springs
7061.8	7169.5	Niobrara
7117.9	7245.0	B Chalk
7140.5	7277.7	B Marl
7176.8	7334.0	C Chalk
7215.8	7401.8	C Marl
7305.2	7627.5	Ft. Hayes
7324.3	7737.5	Codell

T M Azimuths to True North
Magnetic North: 8.77°

Magnetic Field
Strength: 52856.5snT
Dip Angle: 66.82°
Date: 12/14/2012
Model: IGRF2010

Plan #1
State 1G-16H
12xxx; LR
WELL @ 5039.0ft (Original Well Elev)
Ground Elevation @ 5026.0
North American Datum 1983
Well State 1G-16H, True North

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State 1G-16H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 1G-16H	**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 S16-T3N-R68W (State)

Site Position:		**Northing:**	1,326,575.12 ft	**Latitude:**	40.228760
From:	Lat/Long	**Easting:**	3,139,542.66 ft	**Longitude:**	-105.000250
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.32 °

Well State 1G-16H

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,326,586.04 ft	**Latitude:**	40.228790
	+E/-W	0.0 ft	**Easting:**	3,139,542.59 ft	**Longitude:**	-105.000250
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,026.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/14/2012	8.77	66.82	52,857

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	145.00	1,491.2	-102.6	71.8	1.00	1.00	0.00	145.00	
3,950.0	12.00	145.00	3,887.7	-519.8	364.0	0.00	0.00	0.00	0.00	
5,150.0	0.00	0.00	5,079.0	-622.4	435.8	1.00	-1.00	0.00	180.00	
6,682.6	0.00	0.00	6,611.6	-622.4	435.8	0.00	0.00	0.00	0.00	
7,820.1	91.00	270.00	7,327.6	-622.4	-292.9	8.00	8.00	0.00	270.00	
11,847.4	91.00	270.00	7,257.4	-622.5	-4,319.6	0.00	0.00	0.00	0.00	State 1G-16H PBHL

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State 1G-16H
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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 1G-16H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300'
400.0	1.00	145.00	400.0	-0.7	0.5	-0.5	1.00	1.00	
500.0	2.00	145.00	500.0	-2.9	2.0	-2.0	1.00	1.00	
600.0	3.00	145.00	599.9	-6.4	4.5	-4.5	1.00	1.00	
700.0	4.00	145.00	699.7	-11.4	8.0	-8.0	1.00	1.00	
800.0	5.00	145.00	799.4	-17.9	12.5	-12.5	1.00	1.00	
900.0	6.00	145.00	898.9	-25.7	18.0	-18.0	1.00	1.00	
1,000.0	7.00	145.00	998.3	-35.0	24.5	-24.5	1.00	1.00	
1,100.0	8.00	145.00	1,097.4	-45.7	32.0	-32.0	1.00	1.00	
1,200.0	9.00	145.00	1,196.3	-57.8	40.5	-40.5	1.00	1.00	
1,300.0	10.00	145.00	1,294.9	-71.3	49.9	-49.9	1.00	1.00	
1,400.0	11.00	145.00	1,393.3	-86.2	60.4	-60.4	1.00	1.00	
1,500.0	12.00	145.00	1,491.2	-102.6	71.8	-71.8	1.00	1.00	EOB; Inc=12°
1,600.0	12.00	145.00	1,589.1	-119.6	83.7	-83.7	0.00	0.00	
1,700.0	12.00	145.00	1,686.9	-136.6	95.7	-95.7	0.00	0.00	
1,800.0	12.00	145.00	1,784.7	-153.7	107.6	-107.6	0.00	0.00	
1,900.0	12.00	145.00	1,882.5	-170.7	119.5	-119.5	0.00	0.00	
2,000.0	12.00	145.00	1,980.3	-187.7	131.4	-131.4	0.00	0.00	
2,100.0	12.00	145.00	2,078.1	-204.7	143.4	-143.4	0.00	0.00	
2,200.0	12.00	145.00	2,175.9	-221.8	155.3	-155.3	0.00	0.00	
2,300.0	12.00	145.00	2,273.8	-238.8	167.2	-167.2	0.00	0.00	
2,400.0	12.00	145.00	2,371.6	-255.8	179.1	-179.1	0.00	0.00	
2,500.0	12.00	145.00	2,469.4	-272.9	191.1	-191.1	0.00	0.00	
2,600.0	12.00	145.00	2,567.2	-289.9	203.0	-203.0	0.00	0.00	
2,700.0	12.00	145.00	2,665.0	-306.9	214.9	-214.9	0.00	0.00	
2,800.0	12.00	145.00	2,762.8	-324.0	226.8	-226.8	0.00	0.00	
2,900.0	12.00	145.00	2,860.7	-341.0	238.8	-238.8	0.00	0.00	
3,000.0	12.00	145.00	2,958.5	-358.0	250.7	-250.7	0.00	0.00	
3,100.0	12.00	145.00	3,056.3	-375.1	262.6	-262.6	0.00	0.00	
3,200.0	12.00	145.00	3,154.1	-392.1	274.5	-274.5	0.00	0.00	
3,300.0	12.00	145.00	3,251.9	-409.1	286.5	-286.5	0.00	0.00	
3,400.0	12.00	145.00	3,349.7	-426.2	298.4	-298.4	0.00	0.00	
3,500.0	12.00	145.00	3,447.5	-443.2	310.3	-310.3	0.00	0.00	
3,600.0	12.00	145.00	3,545.4	-460.2	322.2	-322.2	0.00	0.00	
3,700.0	12.00	145.00	3,643.2	-477.2	334.2	-334.2	0.00	0.00	
3,800.0	12.00	145.00	3,741.0	-494.3	346.1	-346.1	0.00	0.00	
3,900.0	12.00	145.00	3,838.8	-511.3	358.0	-358.0	0.00	0.00	
3,950.0	12.00	145.00	3,887.7	-519.8	364.0	-364.0	0.00	0.00	Start Drop -1.00
4,000.0	11.50	145.00	3,936.7	-528.2	369.8	-369.8	1.00	-1.00	
4,100.0	10.50	145.00	4,034.8	-543.8	380.8	-380.8	1.00	-1.00	
4,116.1	10.34	145.00	4,050.7	-546.2	382.4	-382.4	1.00	-1.00	Sussex
4,200.0	9.50	145.00	4,133.3	-558.0	390.7	-390.7	1.00	-1.00	
4,300.0	8.50	145.00	4,232.1	-570.8	399.7	-399.7	1.00	-1.00	
4,400.0	7.50	145.00	4,331.1	-582.2	407.7	-407.7	1.00	-1.00	
4,500.0	6.50	145.00	4,430.3	-592.2	414.7	-414.7	1.00	-1.00	
4,600.0	5.50	145.00	4,529.8	-600.8	420.7	-420.7	1.00	-1.00	
4,671.9	4.78	145.00	4,601.4	-606.1	424.4	-424.4	1.00	-1.00	Shannon
4,700.0	4.50	145.00	4,629.4	-607.9	425.7	-425.7	1.00	-1.00	
4,800.0	3.50	145.00	4,729.2	-613.6	429.7	-429.7	1.00	-1.00	

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Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 1G-16H	**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
4,900.0	2.50	145.00	4,829.0	-617.9	432.7	-432.7	1.00	-1.00	
5,000.0	1.50	145.00	4,929.0	-620.8	434.7	-434.7	1.00	-1.00	
5,100.0	0.50	145.00	5,029.0	-622.2	435.7	-435.7	1.00	-1.00	
5,150.0	0.00	0.00	5,079.0	-622.4	435.8	-435.8	1.00	-1.00	EOD; Inc=0°
5,200.0	0.00	0.00	5,129.0	-622.4	435.8	-435.8	0.00	0.00	
5,300.0	0.00	0.00	5,229.0	-622.4	435.8	-435.8	0.00	0.00	
5,400.0	0.00	0.00	5,329.0	-622.4	435.8	-435.8	0.00	0.00	
5,500.0	0.00	0.00	5,429.0	-622.4	435.8	-435.8	0.00	0.00	
5,600.0	0.00	0.00	5,529.0	-622.4	435.8	-435.8	0.00	0.00	
5,700.0	0.00	0.00	5,629.0	-622.4	435.8	-435.8	0.00	0.00	
5,800.0	0.00	0.00	5,729.0	-622.4	435.8	-435.8	0.00	0.00	
5,900.0	0.00	0.00	5,829.0	-622.4	435.8	-435.8	0.00	0.00	
6,000.0	0.00	0.00	5,929.0	-622.4	435.8	-435.8	0.00	0.00	
6,100.0	0.00	0.00	6,029.0	-622.4	435.8	-435.8	0.00	0.00	
6,119.7	0.00	0.00	6,048.6	-622.4	435.8	-435.8	0.00	0.00	Teepee Buttes (*if present)
6,200.0	0.00	0.00	6,129.0	-622.4	435.8	-435.8	0.00	0.00	
6,300.0	0.00	0.00	6,229.0	-622.4	435.8	-435.8	0.00	0.00	
6,400.0	0.00	0.00	6,329.0	-622.4	435.8	-435.8	0.00	0.00	
6,500.0	0.00	0.00	6,429.0	-622.4	435.8	-435.8	0.00	0.00	
6,600.0	0.00	0.00	6,529.0	-622.4	435.8	-435.8	0.00	0.00	
6,682.6	0.00	0.00	6,611.6	-622.4	435.8	-435.8	0.00	0.00	Start 8° build @ 6682' MD
6,700.0	1.39	270.00	6,629.0	-622.4	435.6	-435.6	8.00	8.00	
6,800.0	9.39	270.00	6,728.4	-622.4	426.2	-426.2	8.00	8.00	
6,900.0	17.39	270.00	6,825.6	-622.4	403.1	-403.1	8.00	8.00	
7,000.0	25.39	270.00	6,918.7	-622.4	366.6	-366.6	8.00	8.00	
7,084.5	32.15	270.00	6,992.7	-622.4	326.0	-326.0	8.00	8.00	Sharon Springs
7,100.0	33.39	270.00	7,005.7	-622.4	317.6	-317.6	8.00	8.00	
7,169.5	38.95	270.00	7,061.8	-622.4	276.6	-276.6	8.00	8.00	Niobrara
7,200.0	41.39	270.00	7,085.1	-622.4	256.9	-256.9	8.00	8.00	
7,245.0	45.00	270.00	7,117.9	-622.4	226.1	-226.1	8.00	8.00	B Chalk
7,277.7	47.61	270.00	7,140.5	-622.4	202.4	-202.4	8.00	8.00	B Marl
7,300.0	49.39	270.00	7,155.3	-622.4	185.8	-185.8	8.00	8.00	
7,334.0	52.11	270.00	7,176.8	-622.4	159.4	-159.4	8.00	8.00	C Chalk
7,400.0	57.39	270.00	7,214.9	-622.4	105.6	-105.6	8.00	8.00	
7,401.8	57.53	270.00	7,215.8	-622.4	104.1	-104.1	8.00	8.00	C Marl
7,500.0	65.39	270.00	7,262.7	-622.4	17.8	-17.8	8.00	8.00	
7,600.0	73.39	270.00	7,297.9	-622.4	-75.7	75.7	8.00	8.00	
7,627.5	75.59	270.00	7,305.2	-622.4	-102.1	102.1	8.00	8.00	Ft. Hayes
7,700.0	81.39	270.00	7,319.7	-622.4	-173.2	173.2	8.00	8.00	
7,737.5	84.39	270.00	7,324.3	-622.4	-210.4	210.4	8.00	8.00	Codell
7,800.0	89.39	270.00	7,327.7	-622.4	-272.8	272.8	8.00	8.00	
7,820.1	91.00	270.00	7,327.6	-622.4	-292.9	292.9	8.00	8.00	LP @ 7327' TVD; 91°
7,900.0	91.00	270.00	7,326.3	-622.4	-372.8	372.8	0.00	0.00	
8,000.0	91.00	270.00	7,324.5	-622.4	-472.8	472.8	0.00	0.00	
8,100.0	91.00	270.00	7,322.8	-622.4	-572.8	572.8	0.00	0.00	
8,200.0	91.00	270.00	7,321.0	-622.4	-672.7	672.7	0.00	0.00	
8,300.0	91.00	270.00	7,319.3	-622.4	-772.7	772.7	0.00	0.00	
8,400.0	91.00	270.00	7,317.5	-622.4	-872.7	872.7	0.00	0.00	
8,500.0	91.00	270.00	7,315.8	-622.4	-972.7	972.7	0.00	0.00	
8,600.0	91.00	270.00	7,314.0	-622.4	-1,072.7	1,072.7	0.00	0.00	
8,700.0	91.00	270.00	7,312.3	-622.4	-1,172.7	1,172.7	0.00	0.00	
8,800.0	91.00	270.00	7,310.5	-622.4	-1,272.6	1,272.6	0.00	0.00	

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Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 1G-16H	**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
8,900.0	91.00	270.00	7,308.8	-622.4	-1,372.6	1,372.6	0.00	0.00	
9,000.0	91.00	270.00	7,307.1	-622.4	-1,472.6	1,472.6	0.00	0.00	
9,100.0	91.00	270.00	7,305.3	-622.5	-1,572.6	1,572.6	0.00	0.00	
9,200.0	91.00	270.00	7,303.6	-622.5	-1,672.6	1,672.6	0.00	0.00	
9,300.0	91.00	270.00	7,301.8	-622.5	-1,772.6	1,772.6	0.00	0.00	
9,400.0	91.00	270.00	7,300.1	-622.5	-1,872.6	1,872.6	0.00	0.00	
9,500.0	91.00	270.00	7,298.3	-622.5	-1,972.5	1,972.5	0.00	0.00	
9,600.0	91.00	270.00	7,296.6	-622.5	-2,072.5	2,072.5	0.00	0.00	
9,700.0	91.00	270.00	7,294.8	-622.5	-2,172.5	2,172.5	0.00	0.00	
9,800.0	91.00	270.00	7,293.1	-622.5	-2,272.5	2,272.5	0.00	0.00	
9,900.0	91.00	270.00	7,291.3	-622.5	-2,372.5	2,372.5	0.00	0.00	
10,000.0	91.00	270.00	7,289.6	-622.5	-2,472.5	2,472.5	0.00	0.00	
10,100.0	91.00	270.00	7,287.9	-622.5	-2,572.4	2,572.4	0.00	0.00	
10,200.0	91.00	270.00	7,286.1	-622.5	-2,672.4	2,672.4	0.00	0.00	
10,300.0	91.00	270.00	7,284.4	-622.5	-2,772.4	2,772.4	0.00	0.00	
10,400.0	91.00	270.00	7,282.6	-622.5	-2,872.4	2,872.4	0.00	0.00	
10,500.0	91.00	270.00	7,280.9	-622.5	-2,972.4	2,972.4	0.00	0.00	
10,600.0	91.00	270.00	7,279.1	-622.5	-3,072.4	3,072.4	0.00	0.00	
10,700.0	91.00	270.00	7,277.4	-622.5	-3,172.4	3,172.4	0.00	0.00	
10,800.0	91.00	270.00	7,275.6	-622.5	-3,272.3	3,272.3	0.00	0.00	
10,900.0	91.00	270.00	7,273.9	-622.5	-3,372.3	3,372.3	0.00	0.00	
11,000.0	91.00	270.00	7,272.1	-622.5	-3,472.3	3,472.3	0.00	0.00	
11,100.0	91.00	270.00	7,270.4	-622.5	-3,572.3	3,572.3	0.00	0.00	
11,200.0	91.00	270.00	7,268.7	-622.5	-3,672.3	3,672.3	0.00	0.00	
11,300.0	91.00	270.00	7,266.9	-622.5	-3,772.3	3,772.3	0.00	0.00	
11,400.0	91.00	270.00	7,265.2	-622.5	-3,872.2	3,872.2	0.00	0.00	
11,500.0	91.00	270.00	7,263.4	-622.5	-3,972.2	3,972.2	0.00	0.00	
11,600.0	91.00	270.00	7,261.7	-622.5	-4,072.2	4,072.2	0.00	0.00	
11,700.0	91.00	270.00	7,259.9	-622.5	-4,172.2	4,172.2	0.00	0.00	
11,800.0	91.00	270.00	7,258.2	-622.5	-4,272.2	4,272.2	0.00	0.00	
11,847.4	91.00	270.00	7,257.4	-622.5	-4,319.6	4,319.6	0.00	0.00	TD at 11847.4 - State 1G-16H 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
State 1G-16H PBHL - plan hits target center - Point	0.00	0.00	7,257.4	-622.5	-4,319.6	1,325,939.16	3,135,226.62	40.227080	-105.015720

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State 1G-16H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 1G-16H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,116.1	4,044.0	Sussex		-1.00	270.00
4,671.9	4,594.0	Shannon		-1.00	270.00
6,119.7	6,041.0	Teepee Buttes (*if present)		-1.00	270.00
7,084.5	6,987.0	Sharon Springs		-1.00	270.00
7,169.5	7,057.0	Niobrara		-1.00	270.00
7,245.0	7,114.0	B Chalk		-1.00	270.00
7,277.7	7,137.0	B Marl		-1.00	270.00
7,334.0	7,174.0	C Chalk		-1.00	270.00
7,401.8	7,214.0	C Marl		-1.00	270.00
7,627.5	7,307.0	Ft. Hayes		-1.00	270.00
7,737.5	7,328.0	Codell		-1.00	270.00

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	-102.6	71.8	EOB; Inc=12°
3,950.0	3,887.7	-519.8	364.0	Start Drop -1.00
5,150.0	5,079.0	-622.4	435.8	EOD; Inc=0°
6,682.6	6,611.6	-622.4	435.8	Start 8° build @ 6682' MD
7,820.1	7,327.6	-622.4	-292.9	LP @ 7327' TVD; 91°
11,847.4	7,257.4	-622.5	-4,319.6	TD at 11847.4

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S16-T3N-R68W (State)
State 1G-16H
Hz
Plan #1

Anticollision Report

14 December, 2012

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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** 12/14/2012

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,847.4	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
S16-T3N-R68W (State)						
State 1B-16H - Hz - Plan #1	200.0	200.0	51.0	50.3	78.131	CC, ES
State 1B-16H - Hz - Plan #1	700.0	693.7	82.4	80.0	34.219	SF
State 1C-16H - Hz - Plan #1	300.0	300.0	40.1	39.1	39.999	CC, ES
State 1C-16H - Hz - Plan #1	600.0	597.6	53.2	51.2	25.922	SF
State 1D-16H - Hz - Plan #1	300.0	300.0	29.1	28.1	29.090	CC, ES
State 1D-16H - Hz - Plan #1	600.0	599.1	37.9	35.9	18.469	SF
State 1E-16H - Hz - Plan #1	300.0	300.0	18.2	17.2	18.181	CC, ES
State 1E-16H - Hz - Plan #1	600.0	599.9	25.1	23.0	12.219	SF
State 1F-16H - Hz - Plan #1	300.0	300.0	10.9	9.9	10.909	CC, ES
State 1F-16H - Hz - Plan #1	11,847.4	11,600.4	391.7	201.5	2.060	SF
State 1H-16H - Hz - Plan #1	200.0	200.0	10.9	10.3	16.736	CC, ES
State 1H-16H - Hz - Plan #1	11,847.4	11,676.3	379.8	189.3	1.993	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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 S16-T3N-R68W (State) - State 1B-16H - 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	51.0	0.0	51.0				
100.0	100.0	100.0	100.0	0.2	0.2	0.00	51.0	0.0	51.0	50.7	0.30	167.936	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	51.0	0.0	51.0	50.3	0.65	78.131	CC, ES
300.0	300.0	299.2	299.2	0.5	0.5	0.36	51.8	0.3	51.8	50.8	1.00	51.781	
400.0	400.0	398.3	398.2	0.7	0.7	-144.16	54.2	1.3	54.9	53.6	1.35	40.726	
500.0	500.0	497.1	497.0	0.9	0.9	-144.10	58.1	2.9	61.1	59.4	1.70	35.959	
600.0	599.9	595.7	595.4	1.0	1.1	-144.35	63.7	5.1	70.2	68.2	2.05	34.244	
700.0	699.7	693.7	693.1	1.2	1.3	-144.78	70.7	8.0	82.4	80.0	2.41	34.219	SF
800.0	799.4	791.1	790.1	1.4	1.5	-145.27	79.2	11.4	97.6	94.8	2.77	35.212	
900.0	898.9	887.8	886.2	1.7	1.7	-145.75	89.2	15.4	115.7	112.5	3.14	36.844	
1,000.0	998.3	983.6	981.2	1.9	2.0	-146.19	100.6	20.0	136.7	133.2	3.52	38.888	
1,100.0	1,097.4	1,078.5	1,075.0	2.2	2.3	-146.57	113.3	25.2	160.7	156.8	3.90	41.195	
1,200.0	1,196.3	1,172.2	1,167.5	2.5	2.6	-146.89	127.3	30.8	187.5	183.3	4.30	43.666	
1,300.0	1,294.9	1,264.7	1,258.6	2.8	2.9	-147.16	142.5	37.0	217.2	212.5	4.70	46.230	
1,400.0	1,393.3	1,355.9	1,348.1	3.1	3.2	-147.36	158.7	43.5	249.7	244.6	5.11	48.840	
1,500.0	1,491.2	1,445.7	1,435.9	3.5	3.6	-147.52	176.1	50.5	284.9	279.3	5.54	51.459	
1,600.0	1,589.1	1,534.3	1,522.3	3.9	3.9	-147.77	194.4	57.9	322.1	316.1	5.97	53.903	
1,700.0	1,686.9	1,621.9	1,607.4	4.3	4.3	-147.87	213.8	65.8	360.5	354.1	6.42	56.162	
1,800.0	1,784.7	1,709.1	1,691.7	4.7	4.7	-147.86	234.2	74.0	400.3	393.4	6.87	58.258	
1,900.0	1,882.5	1,800.6	1,780.1	5.1	5.2	-147.81	256.2	82.9	440.5	433.1	7.33	60.054	
2,000.0	1,980.3	1,892.2	1,868.6	5.4	5.6	-147.77	278.1	91.8	480.7	472.9	7.80	61.614	

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 State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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 S16-T3N-R68W (State) - State 1C-16H - 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	40.1	0.0	40.1				
100.0	100.0	100.0	100.0	0.2	0.2	0.00	40.1	0.0	40.1	39.8	0.30	131.949	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	40.1	0.0	40.1	39.4	0.65	61.388	
300.0	300.0	300.0	300.0	0.5	0.5	0.00	40.1	0.0	40.1	39.1	1.00	39.999	CC, ES
400.0	400.0	399.4	399.4	0.7	0.7	-145.07	40.8	0.4	41.5	40.2	1.35	30.763	
500.0	500.0	498.6	498.6	0.9	0.9	-145.27	43.0	1.7	45.9	44.2	1.70	27.011	
600.0	599.9	597.6	597.5	1.0	1.0	-145.51	46.7	3.9	53.2	51.2	2.05	25.922	SF
700.0	699.7	696.2	695.9	1.2	1.2	-145.76	51.9	7.0	63.4	61.0	2.41	26.305	
800.0	799.4	794.4	793.8	1.4	1.4	-145.96	58.4	10.8	76.5	73.7	2.78	27.567	
900.0	898.9	891.9	890.8	1.7	1.7	-146.12	66.4	15.5	92.5	89.3	3.15	29.373	
1,000.0	998.3	988.6	987.0	1.9	1.9	-146.23	75.7	21.0	111.3	107.8	3.53	31.518	
1,100.0	1,097.4	1,084.5	1,082.1	2.2	2.1	-146.29	86.3	27.2	132.9	129.0	3.92	33.869	
1,200.0	1,196.3	1,179.5	1,176.0	2.5	2.4	-146.33	98.1	34.2	157.3	153.0	4.33	36.335	
1,300.0	1,294.9	1,273.3	1,268.7	2.8	2.7	-146.33	111.1	41.9	184.5	179.7	4.75	38.855	
1,400.0	1,393.3	1,366.1	1,359.9	3.1	3.0	-146.31	125.3	50.2	214.4	209.2	5.18	41.384	
1,500.0	1,491.2	1,457.5	1,449.7	3.5	3.4	-146.26	140.5	59.1	246.9	241.3	5.63	43.889	
1,600.0	1,589.1	1,549.9	1,540.0	3.9	3.7	-146.33	156.9	68.8	281.2	275.1	6.09	46.174	
1,700.0	1,686.9	1,643.8	1,631.9	4.3	4.1	-146.37	173.7	78.7	315.6	309.1	6.56	48.092	
1,800.0	1,784.7	1,737.6	1,723.7	4.7	4.4	-146.40	190.5	88.6	350.1	343.0	7.04	49.723	
1,900.0	1,882.5	1,831.5	1,815.5	5.1	4.8	-146.42	207.3	98.5	384.5	377.0	7.52	51.123	
2,000.0	1,980.3	1,925.4	1,907.4	5.4	5.2	-146.44	224.2	108.4	418.9	410.9	8.00	52.337	
2,100.0	2,078.1	2,019.3	1,999.2	5.8	5.5	-146.46	241.0	118.3	453.4	444.9	8.49	53.398	
2,200.0	2,175.9	2,113.2	2,091.0	6.2	5.9	-146.48	257.8	128.3	487.8	478.8	8.98	54.332	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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 S16-T3N-R68W (State) - State 1D-16H - 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	29.1	0.0	29.1				
100.0	100.0	100.0	100.0	0.2	0.2	0.00	29.1	0.0	29.1	28.8	0.30	95.963	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.65	44.646	
300.0	300.0	300.0	300.0	0.5	0.5	0.00	29.1	0.0	29.1	28.1	1.00	29.090	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-145.96	29.1	0.0	29.9	28.5	1.35	22.103	
500.0	500.0	499.6	499.6	0.9	0.8	-147.35	29.7	0.6	32.6	30.9	1.70	19.173	
600.0	599.9	599.1	599.0	1.0	1.0	-147.82	31.4	2.6	37.9	35.9	2.05	18.469	SF
700.0	699.7	698.3	698.2	1.2	1.2	-147.61	34.3	5.8	45.8	43.4	2.41	18.986	
800.0	799.4	797.2	796.9	1.4	1.4	-147.02	38.3	10.3	56.2	53.4	2.78	20.223	
900.0	898.9	895.7	895.1	1.7	1.6	-146.29	43.3	16.0	69.2	66.0	3.16	21.896	
1,000.0	998.3	993.6	992.6	1.9	1.8	-145.54	49.5	23.0	84.7	81.1	3.55	23.828	
1,100.0	1,097.4	1,090.9	1,089.3	2.2	2.1	-144.83	56.7	31.2	102.7	98.8	3.97	25.903	
1,200.0	1,196.3	1,187.5	1,185.1	2.5	2.3	-144.18	64.9	40.5	123.2	118.9	4.40	28.038	
1,300.0	1,294.9	1,283.3	1,279.8	2.8	2.6	-143.58	74.2	50.9	146.3	141.4	4.85	30.180	
1,400.0	1,393.3	1,378.3	1,373.5	3.1	2.9	-143.05	84.3	62.4	171.7	166.4	5.32	32.288	
1,500.0	1,491.2	1,472.2	1,466.0	3.5	3.2	-142.56	95.4	74.9	199.6	193.8	5.81	34.336	
1,600.0	1,589.1	1,565.3	1,557.3	3.9	3.5	-142.17	107.4	88.5	229.2	222.9	6.33	36.201	
1,700.0	1,686.9	1,659.6	1,649.5	4.3	3.9	-141.66	120.3	103.0	259.7	252.9	6.87	37.826	
1,800.0	1,784.7	1,754.8	1,742.6	4.7	4.2	-141.23	133.4	117.9	290.3	282.9	7.41	39.181	
1,900.0	1,882.5	1,849.9	1,835.7	5.1	4.6	-140.89	146.5	132.7	320.9	313.0	7.96	40.328	
2,000.0	1,980.3	1,945.1	1,928.8	5.4	5.0	-140.60	159.7	147.5	351.5	343.0	8.51	41.308	
2,100.0	2,078.1	2,040.3	2,021.9	5.8	5.3	-140.36	172.8	162.3	382.1	373.1	9.07	42.154	
2,200.0	2,175.9	2,135.5	2,115.1	6.2	5.7	-140.16	185.9	177.2	412.8	403.1	9.62	42.891	
2,300.0	2,273.8	2,230.7	2,208.2	6.6	6.1	-139.98	199.0	192.0	443.4	433.2	10.18	43.537	
2,400.0	2,371.6	2,325.9	2,301.3	7.0	6.5	-139.83	212.1	206.8	474.0	463.3	10.75	44.109	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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 S16-T3N-R68W (State) - State 1E-16H - 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	18.2	0.0	18.2				
100.0	100.0	100.0	100.0	0.2	0.2	0.00	18.2	0.0	18.2	17.9	0.30	59.977	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	18.2	0.0	18.2	17.6	0.65	27.904	
300.0	300.0	300.0	300.0	0.5	0.5	0.00	18.2	0.0	18.2	17.2	1.00	18.181	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-146.51	18.2	0.0	18.9	17.6	1.35	14.016	
500.0	500.0	500.0	500.0	0.9	0.8	-150.41	18.2	0.0	21.2	19.5	1.70	12.447	
600.0	599.9	599.9	599.9	1.0	1.0	-155.33	18.2	0.0	25.1	23.0	2.05	12.219	SF
700.0	699.7	699.7	699.7	1.2	1.2	-160.07	18.2	0.0	30.7	28.3	2.40	12.799	
800.0	799.4	799.4	799.4	1.4	1.4	-164.06	18.2	0.0	38.2	35.4	2.75	13.899	
900.0	898.9	898.9	898.9	1.7	1.5	-167.22	18.2	0.0	47.5	44.4	3.09	15.347	
1,000.0	998.3	998.3	998.3	1.9	1.7	-169.65	18.2	0.0	58.6	55.1	3.44	17.038	
1,100.0	1,097.4	1,097.8	1,097.8	2.2	1.9	-170.88	18.3	0.8	71.2	67.4	3.78	18.812	
1,200.0	1,196.3	1,197.4	1,197.3	2.5	2.1	-170.82	18.5	3.4	84.9	80.7	4.13	20.548	
1,300.0	1,294.9	1,296.8	1,296.7	2.8	2.2	-169.98	19.0	7.7	99.7	95.2	4.48	22.235	
1,400.0	1,393.3	1,396.1	1,395.8	3.1	2.4	-168.70	19.5	13.6	115.7	110.8	4.85	23.865	
1,500.0	1,491.2	1,495.2	1,494.6	3.5	2.6	-167.16	20.3	21.3	132.9	127.6	5.22	25.427	
1,600.0	1,589.1	1,594.2	1,593.2	3.9	2.8	-165.44	21.2	30.6	150.5	144.9	5.63	26.714	
1,700.0	1,686.9	1,692.6	1,691.0	4.3	3.0	-163.78	22.2	40.9	168.0	162.0	6.06	27.734	
1,800.0	1,784.7	1,791.0	1,788.8	4.7	3.3	-162.44	23.1	51.1	185.6	179.1	6.49	28.592	
1,900.0	1,882.5	1,889.3	1,886.6	5.1	3.5	-161.32	24.1	61.3	203.3	196.4	6.94	29.316	
2,000.0	1,980.3	1,987.7	1,984.4	5.4	3.7	-160.39	25.1	71.6	221.1	213.7	7.39	29.933	
2,100.0	2,078.1	2,086.0	2,082.2	5.8	3.9	-159.59	26.1	81.8	238.9	231.1	7.84	30.462	
2,200.0	2,175.9	2,184.4	2,180.1	6.2	4.2	-158.91	27.1	92.0	256.8	248.5	8.31	30.919	
2,300.0	2,273.8	2,282.7	2,277.9	6.6	4.4	-158.31	28.1	102.3	274.7	265.9	8.77	31.316	
2,400.0	2,371.6	2,381.1	2,375.7	7.0	4.6	-157.79	29.0	112.5	292.6	283.4	9.24	31.663	
2,500.0	2,469.4	2,479.4	2,473.5	7.4	4.9	-157.33	30.0	122.7	310.5	300.8	9.71	31.970	
2,600.0	2,567.2	2,577.8	2,571.3	7.8	5.1	-156.91	31.0	133.0	328.5	318.3	10.19	32.241	
2,700.0	2,665.0	2,676.1	2,669.1	8.2	5.3	-156.54	32.0	143.2	346.5	335.8	10.67	32.482	
2,800.0	2,762.8	2,774.5	2,766.9	8.6	5.6	-156.21	33.0	153.4	364.4	353.3	11.15	32.699	
2,900.0	2,860.7	2,872.8	2,864.7	9.0	5.8	-155.91	34.0	163.7	382.4	370.8	11.63	32.893	
3,000.0	2,958.5	2,971.1	2,962.5	9.4	6.1	-155.63	35.0	173.9	400.4	388.3	12.11	33.069	
3,100.0	3,056.3	3,069.5	3,060.4	9.8	6.3	-155.38	35.9	184.1	418.5	405.9	12.59	33.228	
3,200.0	3,154.1	3,167.8	3,158.2	10.2	6.5	-155.15	36.9	194.4	436.5	423.4	13.08	33.373	
3,300.0	3,251.9	3,266.2	3,256.0	10.6	6.8	-154.94	37.9	204.6	454.5	440.9	13.56	33.506	
3,400.0	3,349.7	3,364.5	3,353.8	11.0	7.0	-154.74	38.9	214.8	472.5	458.5	14.05	33.627	
3,500.0	3,447.5	3,462.9	3,451.6	11.4	7.3	-154.56	39.9	225.1	490.6	476.0	14.54	33.739	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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 S16-T3N-R68W (State) - State 1F-16H - 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	-147.46	10.9	0.0	11.7	10.3	1.35	8.626	
500.0	500.0	500.1	500.1	0.9	0.9	-150.52	10.4	0.7	13.3	11.6	1.70	7.847	
600.0	599.9	600.3	600.2	1.0	1.0	-151.09	8.9	2.9	15.4	13.4	2.05	7.517	
700.0	699.7	700.4	700.3	1.2	1.2	-149.99	6.4	6.5	17.9	15.5	2.41	7.422	
800.0	799.4	800.6	800.3	1.4	1.4	-147.88	2.9	11.5	20.8	18.0	2.79	7.464	
900.0	898.9	900.8	900.1	1.7	1.6	-145.24	-1.6	17.9	24.1	20.9	3.18	7.587	
1,000.0	998.3	1,000.9	999.8	1.9	1.8	-142.37	-7.1	25.8	27.9	24.3	3.60	7.755	
1,100.0	1,097.4	1,101.1	1,099.3	2.2	2.1	-139.49	-13.6	35.1	32.2	28.2	4.06	7.943	
1,200.0	1,196.3	1,201.3	1,198.6	2.5	2.3	-136.71	-21.2	45.8	37.1	32.5	4.56	8.133	
1,300.0	1,294.9	1,301.4	1,297.7	2.8	2.6	-134.11	-29.7	58.0	42.5	37.4	5.11	8.314	
1,400.0	1,393.3	1,401.5	1,396.4	3.1	3.0	-131.70	-39.1	71.5	48.5	42.8	5.72	8.480	
1,500.0	1,491.2	1,501.3	1,494.6	3.5	3.3	-130.38	-49.1	85.7	55.4	49.0	6.34	8.728	
1,600.0	1,589.1	1,601.0	1,592.9	3.9	3.6	-130.01	-59.0	99.9	62.8	55.8	6.97	9.014	
1,700.0	1,686.9	1,700.7	1,691.1	4.3	3.9	-129.71	-68.9	114.1	70.3	62.7	7.60	9.243	
1,800.0	1,784.7	1,800.4	1,789.3	4.7	4.3	-129.47	-78.9	128.3	77.7	69.5	8.24	9.428	
1,900.0	1,882.5	1,900.1	1,887.5	5.1	4.6	-129.28	-88.8	142.4	85.2	76.3	8.89	9.581	
2,000.0	1,980.3	1,999.9	1,985.7	5.4	4.9	-129.11	-98.7	156.6	92.6	83.1	9.54	9.709	
2,100.0	2,078.1	2,099.6	2,083.9	5.8	5.3	-128.97	-108.7	170.8	100.1	89.9	10.19	9.817	
2,200.0	2,175.9	2,199.3	2,182.1	6.2	5.6	-128.85	-118.6	185.0	107.5	96.7	10.85	9.910	
2,300.0	2,273.8	2,299.0	2,280.3	6.6	6.0	-128.75	-128.5	199.2	115.0	103.5	11.51	9.990	
2,400.0	2,371.6	2,398.7	2,378.5	7.0	6.3	-128.66	-138.5	213.4	122.5	110.3	12.17	10.060	
2,500.0	2,469.4	2,498.5	2,476.7	7.4	6.7	-128.58	-148.4	227.6	129.9	117.1	12.84	10.121	
2,600.0	2,567.2	2,598.2	2,574.9	7.8	7.0	-128.50	-158.3	241.7	137.4	123.9	13.50	10.175	
2,700.0	2,665.0	2,697.9	2,673.1	8.2	7.3	-128.44	-168.3	255.9	144.8	130.7	14.17	10.224	
2,800.0	2,762.8	2,797.6	2,771.3	8.6	7.7	-128.38	-178.2	270.1	152.3	137.5	14.83	10.267	
2,900.0	2,860.7	2,897.4	2,869.5	9.0	8.0	-128.33	-188.1	284.3	159.7	144.2	15.50	10.306	
3,000.0	2,958.5	2,997.1	2,967.7	9.4	8.4	-128.28	-198.1	298.5	167.2	151.0	16.17	10.341	
3,100.0	3,056.3	3,096.8	3,066.0	9.8	8.7	-128.23	-208.0	312.7	174.7	157.8	16.84	10.373	
3,200.0	3,154.1	3,196.5	3,164.2	10.2	9.1	-128.19	-217.9	326.8	182.1	164.6	17.51	10.402	
3,300.0	3,251.9	3,296.2	3,262.4	10.6	9.4	-128.15	-227.9	341.0	189.6	171.4	18.18	10.428	
3,400.0	3,349.7	3,396.0	3,360.6	11.0	9.8	-128.12	-237.8	355.2	197.0	178.2	18.85	10.453	
3,500.0	3,447.5	3,494.9	3,458.1	11.4	10.1	-128.19	-247.4	369.0	204.6	185.1	19.50	10.494	
3,600.0	3,545.4	3,593.4	3,555.4	11.8	10.4	-128.66	-256.1	381.4	212.7	192.6	20.07	10.600	
3,700.0	3,643.2	3,691.8	3,652.8	12.2	10.7	-129.51	-263.9	392.5	221.4	200.8	20.56	10.769	
3,800.0	3,741.0	3,789.9	3,750.2	12.6	10.9	-130.68	-270.6	402.1	230.7	209.8	20.98	11.000	
3,900.0	3,838.8	3,887.7	3,847.5	13.0	11.2	-132.13	-276.4	410.4	240.8	219.5	21.32	11.298	
4,000.0	3,936.7	3,985.2	3,944.7	13.4	11.4	-133.82	-281.2	417.2	251.6	230.0	21.58	11.658	
4,100.0	4,034.8	4,082.5	4,041.7	13.8	11.6	-135.50	-285.1	422.7	262.2	240.4	21.79	12.034	
4,200.0	4,133.3	4,179.7	4,138.8	14.1	11.7	-137.11	-288.0	426.9	272.5	250.6	21.95	12.413	
4,300.0	4,232.1	4,276.7	4,235.7	14.5	11.9	-138.67	-289.9	429.7	282.5	260.4	22.08	12.796	
4,400.0	4,331.1	4,373.5	4,332.6	14.7	12.0	-140.18	-291.0	431.1	292.2	270.1	22.17	13.183	
4,500.0	4,430.3	4,471.3	4,430.3	15.0	12.1	-141.65	-291.1	431.4	301.6	279.3	22.23	13.563	
4,600.0	4,529.8	4,570.8	4,529.8	15.2	12.2	-142.90	-291.1	431.4	309.8	287.5	22.32	13.880	
4,700.0	4,629.4	4,670.4	4,629.4	15.4	12.3	-143.89	-291.1	431.4	316.9	294.4	22.44	14.118	
4,800.0	4,729.2	4,770.2	4,729.2	15.6	12.4	-144.65	-291.1	431.4	322.5	299.9	22.60	14.274	
4,900.0	4,829.0	4,870.0	4,829.0	15.8	12.6	-145.20	-291.1	431.4	326.8	304.0	22.77	14.350	
5,000.0	4,929.0	4,969.9	4,929.0	15.9	12.7	-145.57	-291.1	431.4	329.7	306.7	22.98	14.348	
5,100.0	5,029.0	5,069.9	5,029.0	16.0	12.8	-145.75	-291.1	431.4	331.1	307.9	23.21	14.269	

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 State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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 S16-T3N-R68W (State) - State 1F-16H - 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	5,129.0	5,169.9	5,129.0	16.1	12.9	-0.77	-291.1	431.4	331.3	306.5	24.76	13.382	
5,300.0	5,229.0	5,269.9	5,229.0	16.2	13.0	-0.77	-291.1	431.4	331.3	306.3	25.02	13.243	
5,400.0	5,329.0	5,369.9	5,329.0	16.3	13.2	-0.77	-291.1	431.4	331.3	306.0	25.28	13.105	
5,500.0	5,429.0	5,469.9	5,429.0	16.4	13.3	-0.77	-291.1	431.4	331.3	305.8	25.55	12.968	
5,600.0	5,529.0	5,569.9	5,529.0	16.5	13.4	-0.77	-291.1	431.4	331.3	305.5	25.81	12.834	
5,700.0	5,629.0	5,669.9	5,629.0	16.6	13.5	-0.77	-291.1	431.4	331.3	305.2	26.08	12.702	
5,800.0	5,729.0	5,769.9	5,729.0	16.7	13.7	-0.77	-291.1	431.4	331.3	304.9	26.35	12.571	
5,900.0	5,829.0	5,869.9	5,829.0	16.8	13.8	-0.77	-291.1	431.4	331.3	304.7	26.63	12.443	
6,000.0	5,929.0	5,969.9	5,929.0	16.9	13.9	-0.77	-291.1	431.4	331.3	304.4	26.90	12.316	
6,100.0	6,029.0	6,069.9	6,029.0	17.1	14.1	-0.77	-291.1	431.4	331.3	304.1	27.18	12.191	
6,200.0	6,129.0	6,169.9	6,129.0	17.2	14.2	-0.77	-291.1	431.4	331.3	303.8	27.45	12.068	
6,300.0	6,229.0	6,269.9	6,229.0	17.3	14.3	-0.77	-291.1	431.4	331.3	303.6	27.73	11.946	
6,400.0	6,329.0	6,369.9	6,329.0	17.4	14.5	-0.77	-291.1	431.4	331.3	303.3	28.01	11.827	
6,455.6	6,384.5	6,425.5	6,384.5	17.4	14.5	-0.77	-291.1	431.4	331.3	303.1	28.17	11.761	
6,500.0	6,429.0	6,469.8	6,428.8	17.5	14.6	-0.85	-291.1	430.9	331.3	303.0	28.31	11.704	
6,600.0	6,529.0	6,567.9	6,526.3	17.6	14.6	-2.62	-291.1	420.6	331.6	302.8	28.84	11.499	
6,700.0	6,629.0	6,661.6	6,617.3	17.7	14.5	83.56	-291.1	398.5	333.6	307.1	26.44	12.616	
6,800.0	6,728.4	6,750.0	6,699.8	17.7	14.3	79.20	-291.1	366.9	337.8	312.0	25.73	13.126	
6,900.0	6,825.6	6,838.5	6,777.8	17.7	14.1	75.04	-291.1	325.3	343.6	318.6	25.06	13.711	
7,000.0	6,918.7	6,923.4	6,847.4	17.5	13.9	71.34	-291.1	276.6	350.6	326.1	24.55	14.281	
7,100.0	7,005.7	7,006.5	6,909.4	17.3	13.8	68.07	-291.1	221.3	358.2	333.9	24.23	14.780	
7,200.0	7,085.1	7,088.1	6,963.6	17.1	13.7	65.26	-291.1	160.5	365.8	341.6	24.14	15.150	
7,300.0	7,155.3	7,168.5	7,010.0	17.0	13.6	62.91	-291.1	94.9	373.0	348.7	24.31	15.343	
7,400.0	7,214.9	7,250.0	7,049.2	16.9	13.7	60.98	-291.1	23.4	379.4	354.7	24.75	15.331	
7,500.0	7,262.7	7,326.3	7,078.3	17.0	14.2	59.56	-291.1	-47.1	384.7	359.2	25.50	15.086	
7,600.0	7,297.9	7,400.0	7,099.1	17.4	14.9	58.57	-291.1	-117.7	388.6	362.1	26.55	14.636	
7,700.0	7,319.7	7,481.9	7,113.7	18.1	16.0	57.95	-291.1	-198.3	390.9	362.9	28.06	13.932	
7,800.0	7,327.7	7,559.4	7,118.9	19.2	17.2	57.77	-291.1	-275.5	391.7	361.8	29.87	13.113	
7,898.1	7,327.4	7,651.1	7,117.6	20.6	18.8	57.65	-291.1	-367.2	392.2	359.7	32.48	12.074	
7,900.0	7,326.3	7,653.0	7,117.6	20.6	18.8	57.79	-291.1	-369.1	391.6	359.0	32.57	12.021	
8,000.0	7,324.5	7,753.0	7,115.8	22.3	20.7	57.79	-291.1	-469.1	391.6	355.9	35.70	10.969	
8,100.0	7,322.8	7,853.0	7,114.1	24.2	22.6	57.79	-291.1	-569.1	391.6	352.6	39.02	10.035	
8,200.0	7,321.0	7,953.0	7,112.3	26.1	24.7	57.79	-291.1	-669.1	391.6	349.1	42.50	9.213	
8,300.0	7,319.3	8,053.0	7,110.6	28.1	26.8	57.79	-291.1	-769.1	391.6	345.5	46.10	8.494	
8,400.0	7,317.5	8,153.0	7,108.8	30.2	29.0	57.79	-291.1	-869.1	391.6	341.8	49.79	7.865	
8,500.0	7,315.8	8,253.0	7,107.1	32.4	31.2	57.79	-291.1	-969.0	391.6	338.0	53.56	7.312	
8,600.0	7,314.0	8,353.0	7,105.3	34.6	33.5	57.79	-291.1	-1,069.0	391.6	334.2	57.38	6.825	
8,700.0	7,312.3	8,453.0	7,103.6	36.8	35.7	57.79	-291.1	-1,169.0	391.6	330.4	61.25	6.393	
8,800.0	7,310.5	8,553.0	7,101.8	39.1	38.1	57.79	-291.1	-1,269.0	391.6	326.5	65.17	6.009	
8,900.0	7,308.8	8,653.0	7,100.1	41.4	40.4	57.79	-291.1	-1,369.0	391.6	322.5	69.11	5.667	
9,000.0	7,307.1	8,753.0	7,098.4	43.7	42.7	57.79	-291.1	-1,469.0	391.6	318.5	73.08	5.359	
9,100.0	7,305.3	8,853.0	7,096.6	46.0	45.1	57.79	-291.1	-1,569.0	391.6	314.6	77.08	5.081	
9,200.0	7,303.6	8,953.0	7,094.9	48.4	47.5	57.79	-291.1	-1,668.9	391.6	310.5	81.10	4.829	
9,300.0	7,301.8	9,053.0	7,093.1	50.7	49.8	57.79	-291.1	-1,768.9	391.6	306.5	85.13	4.601	
9,400.0	7,300.1	9,153.0	7,091.4	53.1	52.2	57.79	-291.1	-1,868.9	391.6	302.5	89.18	4.392	
9,500.0	7,298.3	9,253.0	7,089.6	55.4	54.6	57.79	-291.1	-1,968.9	391.6	298.4	93.24	4.201	
9,600.0	7,296.6	9,353.0	7,087.9	57.8	57.0	57.79	-291.1	-2,068.9	391.7	294.3	97.31	4.025	
9,700.0	7,294.8	9,453.0	7,086.1	60.2	59.4	57.79	-291.1	-2,168.9	391.7	290.3	101.39	3.863	
9,800.0	7,293.1	9,553.0	7,084.4	62.6	61.8	57.80	-291.1	-2,268.8	391.7	286.2	105.48	3.713	
9,900.0	7,291.3	9,653.0	7,082.6	65.0	64.3	57.80	-291.1	-2,368.8	391.7	282.1	109.58	3.574	
10,000.0	7,289.6	9,753.0	7,080.9	67.4	66.7	57.80	-291.1	-2,468.8	391.7	278.0	113.68	3.445	
10,100.0	7,287.9	9,853.0	7,079.2	69.8	69.1	57.80	-291.1	-2,568.8	391.7	273.9	117.79	3.325	

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 State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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 S16-T3N-R68W (State) - State 1F-16H - 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
10,200.0	7,286.1	9,953.0	7,077.4	72.2	71.5	57.80	-291.1	-2,668.8	391.7	269.8	121.91	3.213	
10,300.0	7,284.4	10,053.0	7,075.7	74.7	74.0	57.80	-291.1	-2,768.8	391.7	265.6	126.03	3.108	
10,400.0	7,282.6	10,153.0	7,073.9	77.1	76.4	57.80	-291.1	-2,868.8	391.7	261.5	130.16	3.009	
10,500.0	7,280.9	10,253.0	7,072.2	79.5	78.8	57.80	-291.1	-2,968.7	391.7	257.4	134.29	2.917	
10,600.0	7,279.1	10,353.0	7,070.4	81.9	81.3	57.80	-291.1	-3,068.7	391.7	253.3	138.42	2.830	
10,700.0	7,277.4	10,453.0	7,068.7	84.4	83.7	57.80	-291.1	-3,168.7	391.7	249.1	142.56	2.748	
10,800.0	7,275.6	10,553.0	7,066.9	86.8	86.2	57.80	-291.1	-3,268.7	391.7	245.0	146.70	2.670	
10,900.0	7,273.9	10,653.0	7,065.2	89.2	88.6	57.80	-291.1	-3,368.7	391.7	240.9	150.84	2.597	
11,000.0	7,272.1	10,753.0	7,063.4	91.7	91.1	57.80	-291.1	-3,468.7	391.7	236.7	154.99	2.527	
11,100.0	7,270.4	10,853.0	7,061.7	94.1	93.5	57.80	-291.1	-3,568.6	391.7	232.6	159.14	2.461	
11,200.0	7,268.7	10,953.0	7,060.0	96.6	96.0	57.80	-291.1	-3,668.6	391.7	228.4	163.29	2.399	
11,300.0	7,266.9	11,053.0	7,058.2	99.0	98.4	57.80	-291.1	-3,768.6	391.7	224.3	167.44	2.339	
11,400.0	7,265.2	11,153.0	7,056.5	101.4	100.9	57.80	-291.0	-3,868.6	391.7	220.1	171.60	2.283	
11,500.0	7,263.4	11,253.0	7,054.7	103.9	103.3	57.80	-291.0	-3,968.6	391.7	216.0	175.75	2.229	
11,600.0	7,261.7	11,353.0	7,053.0	106.3	105.8	57.80	-291.0	-4,068.6	391.7	211.8	179.91	2.177	
11,700.0	7,259.9	11,453.0	7,051.2	108.8	108.2	57.80	-291.0	-4,168.6	391.7	207.7	184.07	2.128	
11,800.0	7,258.2	11,553.0	7,049.5	111.2	110.7	57.80	-291.0	-4,268.5	391.7	203.5	188.23	2.081	
11,847.4	7,257.4	11,600.4	7,048.7	112.4	111.8	57.80	-291.0	-4,315.9	391.7	201.5	190.21	2.060	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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 S16-T3N-R68W (State) - State 1H-16H - 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	35.973	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-10.9	0.0	10.9	10.3	0.65	16.736	CC, ES
300.0	300.0	299.8	299.8	0.5	0.5	178.17	-11.7	0.4	11.7	10.7	1.00	11.691	
400.0	400.0	399.6	399.6	0.7	0.7	30.72	-14.1	1.5	13.4	12.0	1.35	9.911	
500.0	500.0	499.4	499.2	0.9	0.9	29.81	-18.0	3.4	15.2	13.5	1.70	8.931	
600.0	599.9	599.1	598.7	1.0	1.1	29.98	-23.5	6.0	17.1	15.1	2.06	8.331	
700.0	699.7	698.8	698.1	1.2	1.3	30.89	-30.5	9.3	19.2	16.8	2.42	7.938	
800.0	799.4	798.4	797.3	1.4	1.5	32.32	-39.1	13.4	21.4	18.6	2.79	7.667	
900.0	898.9	898.0	896.3	1.7	1.8	34.09	-49.3	18.3	23.7	20.5	3.17	7.469	
1,000.0	998.3	997.6	995.0	1.9	2.0	36.09	-60.9	23.9	26.2	22.6	3.58	7.315	
1,100.0	1,097.4	1,097.1	1,093.5	2.2	2.3	38.22	-74.2	30.2	28.8	24.8	4.01	7.185	
1,200.0	1,196.3	1,196.6	1,191.6	2.5	2.7	40.40	-89.0	37.2	31.7	27.2	4.49	7.065	
1,300.0	1,294.9	1,296.1	1,289.4	2.8	3.0	42.60	-105.3	45.0	34.8	29.8	5.00	6.948	
1,400.0	1,393.3	1,395.5	1,386.8	3.1	3.4	44.77	-123.1	53.5	38.0	32.5	5.57	6.828	
1,500.0	1,491.2	1,495.4	1,484.6	3.5	3.8	47.58	-141.8	62.4	40.9	34.7	6.21	6.587	
1,600.0	1,589.1	1,595.3	1,582.3	3.9	4.1	50.91	-160.6	71.4	43.3	36.4	6.93	6.258	
1,700.0	1,686.9	1,695.3	1,680.1	4.3	4.5	53.89	-179.3	80.3	45.9	38.2	7.67	5.984	
1,800.0	1,784.7	1,795.2	1,777.8	4.7	4.9	56.54	-198.1	89.3	48.6	40.1	8.44	5.755	
1,900.0	1,882.5	1,895.2	1,875.6	5.1	5.3	58.91	-216.9	98.2	51.3	42.1	9.22	5.563	
2,000.0	1,980.3	1,995.1	1,973.4	5.4	5.7	61.04	-235.6	107.2	54.1	44.1	10.02	5.403	
2,100.0	2,078.1	2,095.1	2,071.1	5.8	6.1	62.95	-254.4	116.1	57.0	46.2	10.83	5.269	
2,200.0	2,175.9	2,195.0	2,168.9	6.2	6.5	64.68	-273.1	125.1	60.0	48.4	11.64	5.155	
2,300.0	2,273.8	2,294.9	2,266.6	6.6	6.9	66.24	-291.9	134.0	63.0	50.5	12.46	5.058	
2,400.0	2,371.6	2,394.9	2,364.4	7.0	7.3	67.67	-310.6	143.0	66.1	52.8	13.28	4.976	
2,500.0	2,469.4	2,494.8	2,462.1	7.4	7.7	68.96	-329.4	151.9	69.1	55.0	14.10	4.904	
2,600.0	2,567.2	2,594.8	2,559.9	7.8	8.1	70.14	-348.1	160.8	72.3	57.3	14.92	4.843	
2,700.0	2,665.0	2,694.7	2,657.7	8.2	8.5	71.23	-366.9	169.8	75.4	59.7	15.74	4.789	
2,800.0	2,762.8	2,794.6	2,755.4	8.6	8.9	72.23	-385.6	178.7	78.6	62.0	16.57	4.743	
2,900.0	2,860.7	2,894.6	2,853.2	9.0	9.3	73.15	-404.4	187.7	81.8	64.4	17.39	4.701	
3,000.0	2,958.5	2,994.5	2,950.9	9.4	9.7	74.00	-423.2	196.6	85.0	66.8	18.22	4.665	
3,100.0	3,056.3	3,094.5	3,048.7	9.8	10.1	74.78	-441.9	205.6	88.2	69.2	19.04	4.633	
3,200.0	3,154.1	3,194.4	3,146.4	10.2	10.5	75.52	-460.7	214.5	91.5	71.6	19.86	4.604	
3,300.0	3,251.9	3,294.3	3,244.2	10.6	10.9	76.20	-479.4	223.5	94.7	74.0	20.69	4.579	
3,400.0	3,349.7	3,394.3	3,341.9	11.0	11.3	76.84	-498.2	232.4	98.0	76.5	21.51	4.556	
3,500.0	3,447.5	3,494.2	3,439.7	11.4	11.7	77.43	-516.9	241.4	101.3	78.9	22.33	4.535	
3,600.0	3,545.4	3,594.2	3,537.5	11.8	12.1	77.99	-535.7	250.3	104.6	81.4	23.15	4.517	
3,700.0	3,643.2	3,694.1	3,635.2	12.2	12.5	78.52	-554.4	259.2	107.9	83.9	23.97	4.500	
3,800.0	3,741.0	3,794.0	3,733.0	12.6	12.9	79.01	-573.2	268.2	111.2	86.4	24.79	4.484	
3,900.0	3,838.8	3,894.0	3,830.7	13.0	13.3	79.47	-591.9	277.1	114.5	88.9	25.61	4.471	
4,000.0	3,936.7	3,993.9	3,928.5	13.4	13.7	79.82	-610.7	286.1	117.9	91.4	26.42	4.462	
4,100.0	4,034.8	4,093.9	4,026.2	13.8	14.1	79.46	-629.5	295.0	121.5	94.4	27.13	4.479	
4,200.0	4,133.3	4,193.7	4,123.9	14.1	14.5	78.35	-648.2	304.0	125.5	97.8	27.73	4.526	
4,300.0	4,232.1	4,293.6	4,221.6	14.5	14.9	76.56	-666.9	312.9	129.9	101.7	28.22	4.604	
4,400.0	4,331.1	4,393.3	4,319.1	14.7	15.3	74.18	-685.6	321.8	134.9	106.4	28.57	4.723	
4,500.0	4,430.3	4,492.9	4,416.5	15.0	15.7	71.32	-704.3	330.7	140.7	112.0	28.78	4.890	
4,600.0	4,529.8	4,592.3	4,513.8	15.2	16.1	68.08	-723.0	339.6	147.5	118.7	28.83	5.117	
4,700.0	4,629.4	4,691.5	4,610.8	15.4	16.5	64.57	-741.6	348.5	155.5	126.8	28.71	5.414	
4,800.0	4,729.2	4,790.5	4,707.7	15.6	16.9	60.90	-760.2	357.4	164.8	136.4	28.45	5.793	
4,900.0	4,829.0	4,889.3	4,804.3	15.8	17.3	57.18	-778.7	366.2	175.7	147.7	28.07	6.261	
5,000.0	4,929.0	4,987.7	4,900.6	15.9	17.7	53.50	-797.2	375.0	188.4	160.8	27.59	6.828	
5,100.0	5,029.0	5,085.9	4,996.6	16.0	18.1	49.95	-815.6	383.8	202.8	175.8	27.05	7.499	

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 State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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 S16-T3N-R68W (State) - State 1H-16H - 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	5,129.0	5,184.3	5,092.9	16.1	18.5	-168.47	-834.1	392.6	219.0	190.4	28.61	7.657	
5,300.0	5,229.0	5,285.7	5,192.3	16.2	18.9	-171.42	-852.0	401.2	235.1	205.3	29.81	7.887	
5,400.0	5,329.0	5,387.7	5,292.7	16.3	19.2	-173.79	-868.4	409.0	250.1	219.3	30.82	8.116	
5,500.0	5,429.0	5,490.4	5,394.0	16.4	19.6	-175.69	-883.3	416.1	264.0	232.3	31.69	8.332	
5,600.0	5,529.0	5,593.7	5,496.2	16.5	19.9	-177.22	-896.7	422.5	276.6	244.1	32.43	8.527	
5,700.0	5,629.0	5,697.4	5,599.1	16.6	20.1	-178.45	-908.4	428.1	287.7	254.6	33.08	8.695	
5,800.0	5,729.0	5,801.6	5,702.7	16.7	20.4	-179.44	-918.5	432.9	297.3	263.6	33.65	8.835	
5,900.0	5,829.0	5,906.1	5,806.9	16.8	20.6	179.79	-926.9	436.9	305.3	271.2	34.14	8.943	
6,000.0	5,929.0	6,011.0	5,911.5	16.9	20.8	179.21	-933.6	440.1	311.7	277.2	34.57	9.018	
6,100.0	6,029.0	6,116.1	6,016.4	17.1	20.9	178.79	-938.6	442.5	316.5	281.6	34.93	9.061	
6,200.0	6,129.0	6,221.4	6,121.6	17.2	21.1	178.52	-941.8	444.0	319.7	284.4	35.24	9.070	
6,300.0	6,229.0	6,326.8	6,227.0	17.3	21.2	178.40	-943.4	444.7	321.1	285.6	35.50	9.044	
6,400.0	6,329.0	6,428.7	6,329.0	17.4	21.3	178.39	-943.5	444.8	321.2	285.5	35.73	8.990	
6,500.0	6,429.0	6,529.0	6,429.2	17.5	21.4	178.45	-943.5	444.5	321.2	285.3	35.94	8.937	
6,592.3	6,521.3	6,621.5	6,521.3	17.6	21.4	-180.00	-943.5	435.8	321.1	285.2	35.84	8.960	
6,600.0	6,529.0	6,629.1	6,528.7	17.6	21.4	-179.78	-943.5	434.5	321.1	285.3	35.81	8.967	
6,700.0	6,629.0	6,724.7	6,621.6	17.7	21.3	-85.80	-943.5	412.2	322.0	293.3	28.68	11.229	
6,800.0	6,728.4	6,816.2	6,706.9	17.7	21.2	-81.20	-943.5	379.4	325.2	295.5	29.65	10.968	
6,900.0	6,825.6	6,904.9	6,785.0	17.7	21.1	-76.90	-943.5	337.5	330.2	300.1	30.16	10.950	
7,000.0	6,918.7	6,991.2	6,855.5	17.5	20.9	-72.97	-943.5	287.7	336.6	306.5	30.14	11.166	
7,100.0	7,005.7	7,075.6	6,918.1	17.3	20.8	-69.46	-943.5	231.3	343.8	314.2	29.65	11.597	
7,200.0	7,085.1	7,158.3	6,972.6	17.1	20.7	-66.41	-943.5	169.1	351.3	322.5	28.79	12.205	
7,300.0	7,155.3	7,239.6	7,018.9	17.0	20.7	-63.82	-943.4	102.3	358.7	330.9	27.78	12.908	
7,400.0	7,214.9	7,319.8	7,056.8	16.9	20.7	-61.69	-943.4	31.7	365.4	338.4	27.01	13.527	
7,500.0	7,262.7	7,400.0	7,086.7	17.0	20.9	-60.01	-943.4	-42.7	371.1	344.5	26.64	13.932	
7,600.0	7,297.9	7,477.7	7,107.4	17.4	21.2	-58.79	-943.4	-117.6	375.6	348.4	27.16	13.830	
7,700.0	7,319.7	7,555.9	7,120.0	18.1	21.6	-58.00	-943.4	-194.7	378.6	350.0	28.67	13.206	
7,800.0	7,327.7	7,633.8	7,124.2	19.2	22.2	-57.62	-943.4	-272.5	380.1	348.9	31.17	12.194	
7,900.0	7,326.3	7,730.6	7,122.6	20.6	23.2	-57.60	-943.4	-369.3	380.2	346.1	34.07	11.158	
8,000.0	7,324.5	7,830.6	7,120.8	22.3	24.5	-57.60	-943.4	-469.2	380.2	343.0	37.14	10.237	
8,100.0	7,322.8	7,930.6	7,119.1	24.2	26.1	-57.60	-943.4	-569.2	380.2	339.8	40.41	9.409	
8,200.0	7,321.0	8,030.6	7,117.3	26.1	27.8	-57.60	-943.4	-669.2	380.2	336.3	43.83	8.674	
8,300.0	7,319.3	8,130.6	7,115.6	28.1	29.7	-57.59	-943.4	-769.2	380.2	332.8	47.37	8.025	
8,400.0	7,317.5	8,230.6	7,113.8	30.2	31.6	-57.59	-943.4	-869.2	380.1	329.1	51.02	7.451	
8,500.0	7,315.8	8,330.6	7,112.1	32.4	33.7	-57.59	-943.4	-969.2	380.1	325.4	54.73	6.945	
8,600.0	7,314.0	8,430.6	7,110.3	34.6	35.8	-57.59	-943.4	-1,069.1	380.1	321.6	58.52	6.496	
8,700.0	7,312.3	8,530.6	7,108.6	36.8	38.0	-57.59	-943.4	-1,169.1	380.1	317.8	62.35	6.097	
8,800.0	7,310.5	8,630.6	7,106.8	39.1	40.2	-57.59	-943.3	-1,269.1	380.1	313.9	66.22	5.740	
8,900.0	7,308.8	8,730.6	7,105.1	41.4	42.4	-57.59	-943.3	-1,369.1	380.1	310.0	70.13	5.420	
9,000.0	7,307.1	8,830.6	7,103.4	43.7	44.6	-57.59	-943.3	-1,469.1	380.1	306.0	74.07	5.131	
9,100.0	7,305.3	8,930.6	7,101.6	46.0	46.9	-57.59	-943.3	-1,569.1	380.1	302.0	78.04	4.870	
9,200.0	7,303.6	9,030.6	7,099.9	48.4	49.2	-57.59	-943.3	-1,669.1	380.1	298.0	82.03	4.634	
9,300.0	7,301.8	9,130.6	7,098.1	50.7	51.5	-57.59	-943.3	-1,769.0	380.1	294.0	86.03	4.418	
9,400.0	7,300.1	9,230.6	7,096.4	53.1	53.9	-57.59	-943.3	-1,869.0	380.1	290.0	90.05	4.220	
9,500.0	7,298.3	9,330.6	7,094.6	55.4	56.2	-57.58	-943.3	-1,969.0	380.0	286.0	94.09	4.039	
9,600.0	7,296.6	9,430.6	7,092.9	57.8	58.6	-57.58	-943.3	-2,069.0	380.0	281.9	98.13	3.873	
9,700.0	7,294.8	9,530.6	7,091.1	60.2	60.9	-57.58	-943.3	-2,169.0	380.0	277.8	102.19	3.719	
9,800.0	7,293.1	9,630.6	7,089.4	62.6	63.3	-57.58	-943.3	-2,269.0	380.0	273.8	106.26	3.576	
9,900.0	7,291.3	9,730.6	7,087.7	65.0	65.7	-57.58	-943.3	-2,368.9	380.0	269.7	110.33	3.444	
10,000.0	7,289.6	9,830.6	7,085.9	67.4	68.1	-57.58	-943.3	-2,468.9	380.0	265.6	114.42	3.321	
10,100.0	7,287.9	9,930.6	7,084.2	69.8	70.5	-57.58	-943.2	-2,568.9	380.0	261.5	118.51	3.206	
10,200.0	7,286.1	10,030.6	7,082.4	72.2	72.9	-57.58	-943.2	-2,668.9	380.0	257.4	122.60	3.099	

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 State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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 S16-T3N-R68W (State) - State 1H-16H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

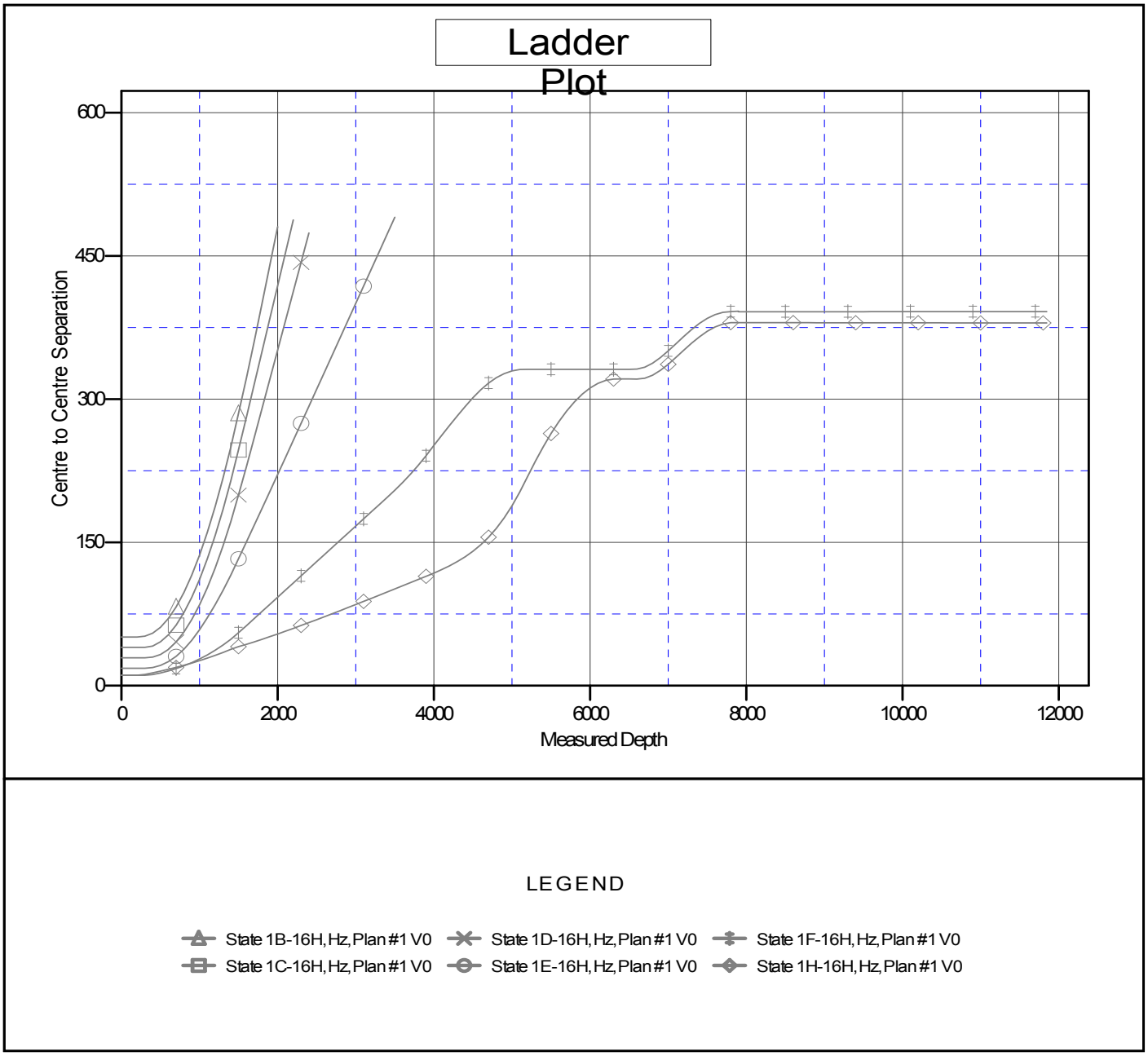
Offset Well Error: 0.0 ft

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	7,284.4	10,130.6	7,080.7	74.7	75.3	-57.58	-943.2	-2,768.9	380.0	253.3	126.70	2.999	
10,400.0	7,282.6	10,230.6	7,078.9	77.1	77.7	-57.58	-943.2	-2,868.9	380.0	249.2	130.81	2.905	
10,500.0	7,280.9	10,330.6	7,077.2	79.5	80.1	-57.58	-943.2	-2,968.9	380.0	245.0	134.92	2.816	
10,600.0	7,279.1	10,430.6	7,075.4	81.9	82.5	-57.57	-943.2	-3,068.8	379.9	240.9	139.04	2.733	
10,700.0	7,277.4	10,530.6	7,073.7	84.4	84.9	-57.57	-943.2	-3,168.8	379.9	236.8	143.15	2.654	
10,800.0	7,275.6	10,630.6	7,071.9	86.8	87.3	-57.57	-943.2	-3,268.8	379.9	232.6	147.28	2.580	
10,900.0	7,273.9	10,730.6	7,070.2	89.2	89.8	-57.57	-943.2	-3,368.8	379.9	228.5	151.40	2.509	
11,000.0	7,272.1	10,830.6	7,068.5	91.7	92.2	-57.57	-943.2	-3,468.8	379.9	224.4	155.53	2.443	
11,100.0	7,270.4	10,930.6	7,066.7	94.1	94.6	-57.57	-943.2	-3,568.8	379.9	220.2	159.66	2.379	
11,200.0	7,268.7	11,030.6	7,065.0	96.6	97.1	-57.57	-943.2	-3,668.7	379.9	216.1	163.79	2.319	
11,300.0	7,266.9	11,130.6	7,063.2	99.0	99.5	-57.57	-943.2	-3,768.7	379.9	212.0	167.93	2.262	
11,400.0	7,265.2	11,230.6	7,061.5	101.4	101.9	-57.57	-943.1	-3,868.7	379.9	207.8	172.07	2.208	
11,500.0	7,263.4	11,330.6	7,059.7	103.9	104.4	-57.57	-943.1	-3,968.7	379.9	203.7	176.21	2.156	
11,600.0	7,261.7	11,430.6	7,058.0	106.3	106.8	-57.57	-943.1	-4,068.7	379.9	199.5	180.35	2.106	
11,700.0	7,259.9	11,530.6	7,056.2	108.8	109.2	-57.57	-943.1	-4,168.7	379.8	195.4	184.49	2.059	
11,800.0	7,258.2	11,630.6	7,054.5	111.2	111.7	-57.56	-943.1	-4,268.7	379.8	191.2	188.63	2.014	
11,836.5	7,257.5	11,667.1	7,053.9	112.1	112.6	-57.56	-943.1	-4,305.1	379.8	189.7	190.15	1.998	
11,847.4	7,257.4	11,676.3	7,053.7	112.4	112.8	-57.56	-943.1	-4,314.3	379.8	189.3	190.56	1.993	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1G-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 1G-16H	**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 @ 5039.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: State 1G-16H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.32°



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