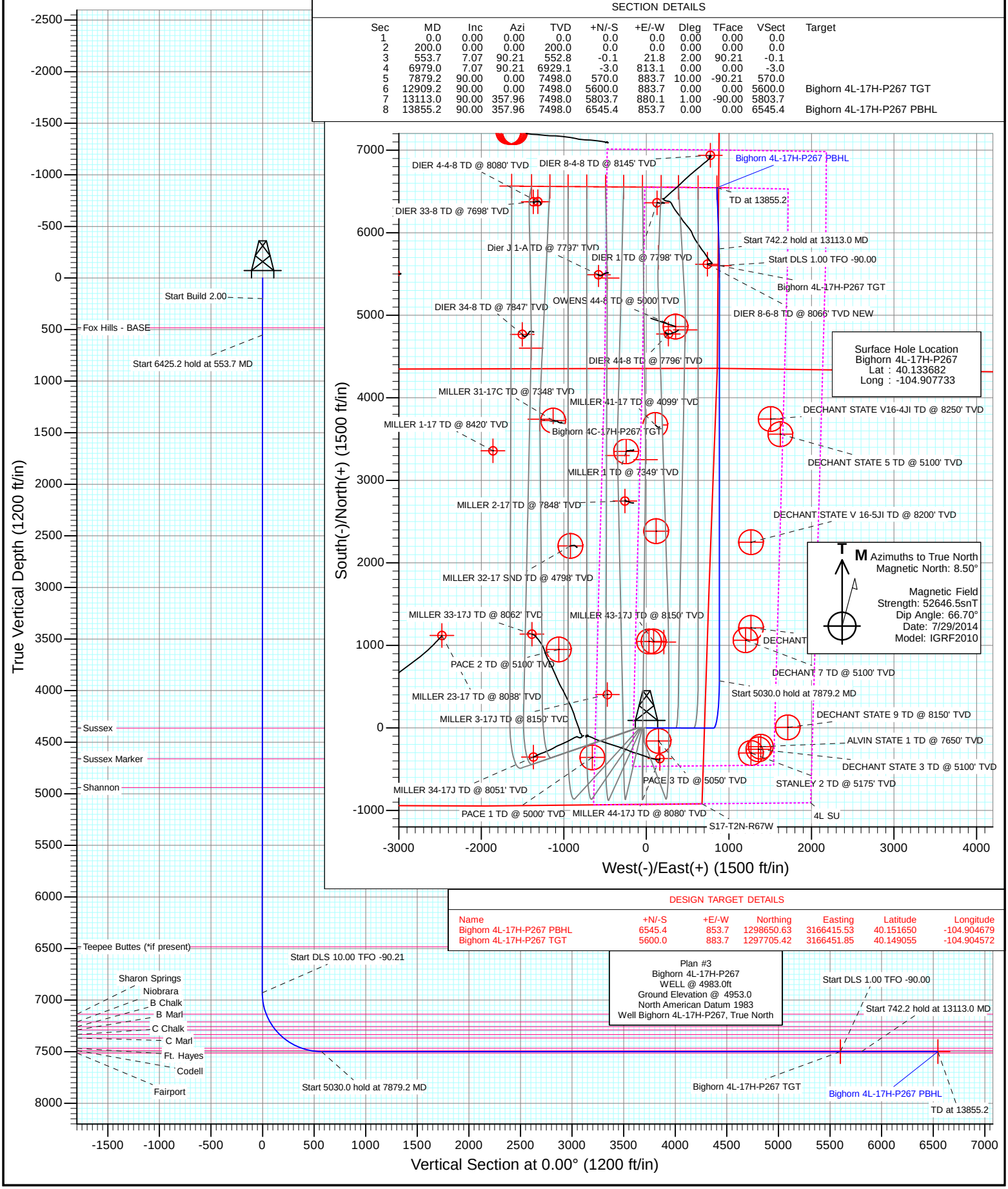
Project: DJ Wattenberg
Site: S17-T2N-R67W (Big Horn)
Well: Bighorn 4L-17H-P267
Wellbore: DD
Design: Plan #3

encana

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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	553.7	7.07	90.21	552.8	-0.1	21.8	2.00	90.21	-0.1	
4	6979.0	7.07	90.21	6929.1	-3.0	813.1	0.00	0.00	-3.0	
5	7879.2	90.00	0.00	7498.0	570.0	883.7	10.00	-90.21	570.0	
6	12909.2	90.00	0.00	7498.0	5600.0	883.7	0.00	0.00	5600.0	Bighorn 4L-17H-P267 TGT
7	13113.0	90.00	357.96	7498.0	5803.7	880.1	1.00	-90.00	5803.7	
8	13855.2	90.00	357.96	7498.0	6545.4	853.7	0.00	0.00	6545.4	Bighorn 4L-17H-P267 PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Bighorn 4L-17H-P267 PBHL	6545.4	853.7	1298650.63	3166415.53	40.151650	-104.904679
Bighorn 4L-17H-P267 TGT	5600.0	883.7	1297705.42	3166451.85	40.149055	-104.904572

Planning Report

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

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

Site S17-T2N-R67W (Big Horn)

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

Well Bighorn 4L-17H-P267

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,292,099.65 ft	**Latitude:**	40.133682
	+E/-W	0.0 ft	**Easting:**	3,165,605.57 ft	**Longitude:**	-104.907733
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	0.0 ft	**Ground Level:**	4,953.0 ft

Wellbore DD

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/29/2014	8.50	66.70	52,647

Design Plan #3

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	0.00

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
553.7	7.07	90.21	552.8	-0.1	21.8	2.00	2.00	0.00	90.21	
6,979.0	7.07	90.21	6,929.1	-3.0	813.1	0.00	0.00	0.00	0.00	
7,879.2	90.00	0.00	7,498.0	570.0	883.7	10.00	9.21	-10.02	-90.21	
12,909.2	90.00	0.00	7,498.0	5,600.0	883.7	0.00	0.00	0.00	0.00	Bighorn 4L-17H-P267
13,113.0	90.00	357.96	7,498.0	5,803.7	880.1	1.00	0.00	-1.00	-90.00	
13,855.2	90.00	357.96	7,498.0	6,545.4	853.7	0.00	0.00	0.00	0.00	Bighorn 4L-17H-P267

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 4983.0ft
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	**North Reference:**	True
Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	Start Build 2.00
300.0	2.00	90.21	300.0	0.0	1.7	0.0	2.00	2.00	
400.0	4.00	90.21	399.8	0.0	7.0	0.0	2.00	2.00	
483.5	5.67	90.21	483.0	-0.1	14.0	-0.1	2.00	2.00	Fox Hills - BASE
500.0	6.00	90.21	499.5	-0.1	15.7	-0.1	2.00	2.00	
553.7	7.07	90.21	552.8	-0.1	21.8	-0.1	2.00	2.00	Start 6425.2 hold at 553.7 MD
600.0	7.07	90.21	598.7	-0.1	27.5	-0.1	0.00	0.00	
700.0	7.07	90.21	698.0	-0.1	39.8	-0.1	0.00	0.00	
800.0	7.07	90.21	797.2	-0.2	52.1	-0.2	0.00	0.00	
900.0	7.07	90.21	896.5	-0.2	64.5	-0.2	0.00	0.00	
1,000.0	7.07	90.21	995.7	-0.3	76.8	-0.3	0.00	0.00	
1,100.0	7.07	90.21	1,094.9	-0.3	89.1	-0.3	0.00	0.00	
1,200.0	7.07	90.21	1,194.2	-0.4	101.4	-0.4	0.00	0.00	
1,300.0	7.07	90.21	1,293.4	-0.4	113.7	-0.4	0.00	0.00	
1,400.0	7.07	90.21	1,392.7	-0.5	126.0	-0.5	0.00	0.00	
1,500.0	7.07	90.21	1,491.9	-0.5	138.3	-0.5	0.00	0.00	
1,600.0	7.07	90.21	1,591.1	-0.5	150.7	-0.5	0.00	0.00	
1,700.0	7.07	90.21	1,690.4	-0.6	163.0	-0.6	0.00	0.00	
1,800.0	7.07	90.21	1,789.6	-0.6	175.3	-0.6	0.00	0.00	
1,900.0	7.07	90.21	1,888.9	-0.7	187.6	-0.7	0.00	0.00	
2,000.0	7.07	90.21	1,988.1	-0.7	199.9	-0.7	0.00	0.00	
2,100.0	7.07	90.21	2,087.3	-0.8	212.2	-0.8	0.00	0.00	
2,200.0	7.07	90.21	2,186.6	-0.8	224.6	-0.8	0.00	0.00	
2,300.0	7.07	90.21	2,285.8	-0.9	236.9	-0.9	0.00	0.00	
2,400.0	7.07	90.21	2,385.0	-0.9	249.2	-0.9	0.00	0.00	
2,500.0	7.07	90.21	2,484.3	-1.0	261.5	-1.0	0.00	0.00	
2,600.0	7.07	90.21	2,583.5	-1.0	273.8	-1.0	0.00	0.00	
2,700.0	7.07	90.21	2,682.8	-1.0	286.1	-1.0	0.00	0.00	
2,800.0	7.07	90.21	2,782.0	-1.1	298.4	-1.1	0.00	0.00	
2,900.0	7.07	90.21	2,881.2	-1.1	310.8	-1.1	0.00	0.00	
3,000.0	7.07	90.21	2,980.5	-1.2	323.1	-1.2	0.00	0.00	
3,100.0	7.07	90.21	3,079.7	-1.2	335.4	-1.2	0.00	0.00	
3,200.0	7.07	90.21	3,179.0	-1.3	347.7	-1.3	0.00	0.00	
3,300.0	7.07	90.21	3,278.2	-1.3	360.0	-1.3	0.00	0.00	
3,400.0	7.07	90.21	3,377.4	-1.4	372.3	-1.4	0.00	0.00	
3,500.0	7.07	90.21	3,476.7	-1.4	384.7	-1.4	0.00	0.00	
3,600.0	7.07	90.21	3,575.9	-1.4	397.0	-1.4	0.00	0.00	
3,700.0	7.07	90.21	3,675.2	-1.5	409.3	-1.5	0.00	0.00	
3,800.0	7.07	90.21	3,774.4	-1.5	421.6	-1.5	0.00	0.00	
3,900.0	7.07	90.21	3,873.6	-1.6	433.9	-1.6	0.00	0.00	
4,000.0	7.07	90.21	3,972.9	-1.6	446.2	-1.6	0.00	0.00	
4,100.0	7.07	90.21	4,072.1	-1.7	458.5	-1.7	0.00	0.00	
4,200.0	7.07	90.21	4,171.3	-1.7	470.9	-1.7	0.00	0.00	
4,300.0	7.07	90.21	4,270.6	-1.8	483.2	-1.8	0.00	0.00	
4,393.1	7.07	90.21	4,363.0	-1.8	494.6	-1.8	0.00	0.00	Sussex
4,400.0	7.07	90.21	4,369.8	-1.8	495.5	-1.8	0.00	0.00	
4,500.0	7.07	90.21	4,469.1	-1.8	507.8	-1.8	0.00	0.00	
4,600.0	7.07	90.21	4,568.3	-1.9	520.1	-1.9	0.00	0.00	
4,693.4	7.07	90.21	4,661.0	-1.9	531.6	-1.9	0.00	0.00	Sussex Marker
4,700.0	7.07	90.21	4,667.5	-1.9	532.4	-1.9	0.00	0.00	

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Site:	S17-T2N-R67W (Big Horn)	**North Reference:**	True
Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	7.07	90.21	4,766.8	-2.0	544.8	-2.0	0.00	0.00	
4,900.0	7.07	90.21	4,866.0	-2.0	557.1	-2.0	0.00	0.00	
4,973.5	7.07	90.21	4,939.0	-2.1	566.1	-2.1	0.00	0.00	Shannon
5,000.0	7.07	90.21	4,965.3	-2.1	569.4	-2.1	0.00	0.00	
5,100.0	7.07	90.21	5,064.5	-2.1	581.7	-2.1	0.00	0.00	
5,200.0	7.07	90.21	5,163.7	-2.2	594.0	-2.2	0.00	0.00	
5,300.0	7.07	90.21	5,263.0	-2.2	606.3	-2.2	0.00	0.00	
5,400.0	7.07	90.21	5,362.2	-2.3	618.7	-2.3	0.00	0.00	
5,500.0	7.07	90.21	5,461.4	-2.3	631.0	-2.3	0.00	0.00	
5,600.0	7.07	90.21	5,560.7	-2.3	643.3	-2.3	0.00	0.00	
5,700.0	7.07	90.21	5,659.9	-2.4	655.6	-2.4	0.00	0.00	
5,800.0	7.07	90.21	5,759.2	-2.4	667.9	-2.4	0.00	0.00	
5,900.0	7.07	90.21	5,858.4	-2.5	680.2	-2.5	0.00	0.00	
6,000.0	7.07	90.21	5,957.6	-2.5	692.5	-2.5	0.00	0.00	
6,100.0	7.07	90.21	6,056.9	-2.6	704.9	-2.6	0.00	0.00	
6,200.0	7.07	90.21	6,156.1	-2.6	717.2	-2.6	0.00	0.00	
6,300.0	7.07	90.21	6,255.4	-2.7	729.5	-2.7	0.00	0.00	
6,400.0	7.07	90.21	6,354.6	-2.7	741.8	-2.7	0.00	0.00	
6,500.0	7.07	90.21	6,453.8	-2.7	754.1	-2.7	0.00	0.00	
6,529.4	7.07	90.21	6,483.0	-2.8	757.7	-2.8	0.00	0.00	Teepee Buttes (*if present)
6,600.0	7.07	90.21	6,553.1	-2.8	766.4	-2.8	0.00	0.00	
6,700.0	7.07	90.21	6,652.3	-2.8	778.8	-2.8	0.00	0.00	
6,800.0	7.07	90.21	6,751.6	-2.9	791.1	-2.9	0.00	0.00	
6,900.0	7.07	90.21	6,850.8	-2.9	803.4	-2.9	0.00	0.00	
6,979.0	7.07	90.21	6,929.1	-3.0	813.1	-3.0	0.00	0.00	Start DLS 10.00 TFO -90.21
7,000.0	7.37	73.58	6,950.0	-2.6	815.7	-2.6	10.00	1.41	
7,100.0	13.97	29.92	7,048.4	9.7	827.9	9.7	10.00	6.60	
7,192.3	22.40	17.53	7,136.0	36.2	838.8	36.2	10.00	9.13	Sharon Springs
7,200.0	23.13	16.89	7,143.1	39.1	839.7	39.1	10.00	9.48	
7,276.1	30.44	12.19	7,211.0	72.2	848.1	72.2	10.00	9.61	Niobrara
7,300.0	32.77	11.12	7,231.4	84.5	850.6	84.5	10.00	9.72	
7,331.0	35.79	9.91	7,257.0	101.7	853.8	101.7	10.00	9.76	B Chalk
7,371.5	39.76	8.58	7,289.0	126.2	857.8	126.2	10.00	9.80	B Marl
7,400.0	42.56	7.77	7,310.4	144.7	860.4	144.7	10.00	9.82	
7,431.4	45.65	6.97	7,333.0	166.4	863.2	166.4	10.00	9.84	C Chalk
7,482.4	50.68	5.83	7,367.0	204.2	867.4	204.2	10.00	9.86	C Marl
7,500.0	52.42	5.48	7,377.9	217.9	868.8	217.9	10.00	9.88	
7,600.0	62.31	3.73	7,431.8	301.7	875.5	301.7	10.00	9.89	
7,686.1	70.84	2.47	7,466.0	380.5	879.7	380.5	10.00	9.91	Ft. Hayes
7,700.0	72.22	2.28	7,470.4	393.7	880.3	393.7	10.00	9.92	
7,771.6	79.32	1.34	7,488.0	463.0	882.5	463.0	10.00	9.92	Codell
7,800.0	82.14	0.98	7,492.6	491.0	883.0	491.0	10.00	9.92	
7,879.2	90.00	0.00	7,498.0	570.0	883.7	570.0	10.00	9.92	Start 5030.0 hold at 7879.2 MD
7,900.0	90.00	0.00	7,498.0	590.8	883.7	590.8	0.00	0.00	
8,000.0	90.00	0.00	7,498.0	690.8	883.7	690.8	0.00	0.00	
8,100.0	90.00	0.00	7,498.0	790.8	883.7	790.8	0.00	0.00	
8,200.0	90.00	0.00	7,498.0	890.8	883.7	890.8	0.00	0.00	
8,300.0	90.00	0.00	7,498.0	990.8	883.7	990.8	0.00	0.00	
8,400.0	90.00	0.00	7,498.0	1,090.8	883.7	1,090.8	0.00	0.00	
8,500.0	90.00	0.00	7,498.0	1,190.8	883.7	1,190.8	0.00	0.00	
8,600.0	90.00	0.00	7,498.0	1,290.8	883.7	1,290.8	0.00	0.00	
8,700.0	90.00	0.00	7,498.0	1,390.8	883.7	1,390.8	0.00	0.00	

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Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

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
8,800.0	90.00	0.00	7,498.0	1,490.8	883.7	1,490.8	0.00	0.00	
8,900.0	90.00	0.00	7,498.0	1,590.8	883.7	1,590.8	0.00	0.00	
9,000.0	90.00	0.00	7,498.0	1,690.8	883.7	1,690.8	0.00	0.00	
9,100.0	90.00	0.00	7,498.0	1,790.8	883.7	1,790.8	0.00	0.00	
9,200.0	90.00	0.00	7,498.0	1,890.8	883.7	1,890.8	0.00	0.00	
9,300.0	90.00	0.00	7,498.0	1,990.8	883.7	1,990.8	0.00	0.00	
9,400.0	90.00	0.00	7,498.0	2,090.8	883.7	2,090.8	0.00	0.00	
9,500.0	90.00	0.00	7,498.0	2,190.8	883.7	2,190.8	0.00	0.00	
9,600.0	90.00	0.00	7,498.0	2,290.8	883.7	2,290.8	0.00	0.00	
9,700.0	90.00	0.00	7,498.0	2,390.8	883.7	2,390.8	0.00	0.00	
9,800.0	90.00	0.00	7,498.0	2,490.8	883.7	2,490.8	0.00	0.00	
9,900.0	90.00	0.00	7,498.0	2,590.8	883.7	2,590.8	0.00	0.00	
10,000.0	90.00	0.00	7,498.0	2,690.8	883.7	2,690.8	0.00	0.00	
10,100.0	90.00	0.00	7,498.0	2,790.8	883.7	2,790.8	0.00	0.00	
10,200.0	90.00	0.00	7,498.0	2,890.8	883.7	2,890.8	0.00	0.00	
10,300.0	90.00	0.00	7,498.0	2,990.8	883.7	2,990.8	0.00	0.00	
10,400.0	90.00	0.00	7,498.0	3,090.8	883.7	3,090.8	0.00	0.00	
10,500.0	90.00	0.00	7,498.0	3,190.8	883.7	3,190.8	0.00	0.00	
10,600.0	90.00	0.00	7,498.0	3,290.8	883.7	3,290.8	0.00	0.00	
10,700.0	90.00	0.00	7,498.0	3,390.8	883.7	3,390.8	0.00	0.00	
10,800.0	90.00	0.00	7,498.0	3,490.8	883.7	3,490.8	0.00	0.00	
10,900.0	90.00	0.00	7,498.0	3,590.8	883.7	3,590.8	0.00	0.00	
11,000.0	90.00	0.00	7,498.0	3,690.8	883.7	3,690.8	0.00	0.00	
11,100.0	90.00	0.00	7,498.0	3,790.8	883.7	3,790.8	0.00	0.00	
11,200.0	90.00	0.00	7,498.0	3,890.8	883.7	3,890.8	0.00	0.00	
11,300.0	90.00	0.00	7,498.0	3,990.8	883.7	3,990.8	0.00	0.00	
11,400.0	90.00	0.00	7,498.0	4,090.8	883.7	4,090.8	0.00	0.00	
11,500.0	90.00	0.00	7,498.0	4,190.8	883.7	4,190.8	0.00	0.00	
11,600.0	90.00	0.00	7,498.0	4,290.8	883.7	4,290.8	0.00	0.00	
11,700.0	90.00	0.00	7,498.0	4,390.8	883.7	4,390.8	0.00	0.00	
11,800.0	90.00	0.00	7,498.0	4,490.8	883.7	4,490.8	0.00	0.00	
11,900.0	90.00	0.00	7,498.0	4,590.8	883.7	4,590.8	0.00	0.00	
12,000.0	90.00	0.00	7,498.0	4,690.8	883.7	4,690.8	0.00	0.00	
12,100.0	90.00	0.00	7,498.0	4,790.8	883.7	4,790.8	0.00	0.00	
12,200.0	90.00	0.00	7,498.0	4,890.8	883.7	4,890.8	0.00	0.00	
12,300.0	90.00	0.00	7,498.0	4,990.8	883.7	4,990.8	0.00	0.00	
12,400.0	90.00	0.00	7,498.0	5,090.8	883.7	5,090.8	0.00	0.00	
12,500.0	90.00	0.00	7,498.0	5,190.8	883.7	5,190.8	0.00	0.00	
12,600.0	90.00	0.00	7,498.0	5,290.8	883.7	5,290.8	0.00	0.00	
12,700.0	90.00	0.00	7,498.0	5,390.8	883.7	5,390.8	0.00	0.00	
12,800.0	90.00	0.00	7,498.0	5,490.8	883.7	5,490.8	0.00	0.00	
12,900.0	90.00	0.00	7,498.0	5,590.8	883.7	5,590.8	0.00	0.00	
12,909.2	90.00	0.00	7,498.0	5,600.0	883.7	5,600.0	0.00	0.00	Start DLS 1.00 TFO -90.00
13,000.0	90.00	359.09	7,498.0	5,690.8	883.0	5,690.8	1.00	0.00	
13,100.0	90.00	358.09	7,498.0	5,790.7	880.5	5,790.7	1.00	0.00	
13,113.0	90.00	357.96	7,498.0	5,803.7	880.1	5,803.7	1.00	0.00	Start 742.2 hold at 13113.0 MD
13,200.0	90.00	357.96	7,498.0	5,890.7	877.0	5,890.7	0.00	0.00	
13,300.0	90.00	357.96	7,498.0	5,990.6	873.4	5,990.6	0.00	0.00	
13,400.0	90.00	357.96	7,498.0	6,090.6	869.9	6,090.6	0.00	0.00	
13,500.0	90.00	357.96	7,498.0	6,190.5	866.3	6,190.5	0.00	0.00	
13,600.0	90.00	357.96	7,498.0	6,290.4	862.8	6,290.4	0.00	0.00	
13,700.0	90.00	357.96	7,498.0	6,390.4	859.2	6,390.4	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 4983.0ft
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	**North Reference:**	True
Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

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
13,800.0	90.00	357.96	7,498.0	6,490.3	855.6	6,490.3	0.00	0.00	
13,855.2	90.00	357.96	7,498.0	6,545.4	853.7	6,545.4	0.00	0.00	TD at 13855.2

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Bighorn 4L-17H-P267 T(- plan hits target center - Point	0.00	0.00	7,498.0	5,600.0	883.7	1,297,705.42	3,166,451.85	40.149055	-104.904572
Bighorn 4L-17H-P267 Pl - plan hits target center - Point	0.00	0.38	7,498.0	6,545.4	853.7	1,298,650.63	3,166,415.53	40.151650	-104.904679

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
483.5	483.0	Fox Hills - BASE			
4,393.1	4,363.0	Sussex			
4,693.4	4,661.0	Sussex Marker			
4,973.5	4,939.0	Shannon			
6,529.4	6,483.0	Teepee Buttes (*if present)			
7,192.3	7,136.0	Sharon Springs			
7,276.1	7,211.0	Niobrara			
7,331.0	7,257.0	B Chalk			
7,371.5	7,289.0	B Marl			
7,431.4	7,333.0	C Chalk			
7,482.4	7,367.0	C Marl			
7,686.1	7,466.0	Ft. Hayes			
7,771.6	7,488.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
200.0	200.0	0.0	0.0	Start Build 2.00
553.7	552.8	-0.1	21.8	Start 6425.2 hold at 553.7 MD
6,979.0	6,929.1	-3.0	813.1	Start DLS 10.00 TFO -90.21
7,879.2	7,498.0	570.0	883.7	Start 5030.0 hold at 7879.2 MD
12,909.2	7,498.0	5,600.0	883.7	Start DLS 1.00 TFO -90.00
13,113.0	7,498.0	5,803.7	880.1	Start 742.2 hold at 13113.0 MD
13,855.2	7,498.0	6,545.4	853.7	TD at 13855.2

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S17-T2N-R67W (Big Horn)
Bighorn 4L-17H-P267
DD
Plan #3

Anticollision Report

18 November, 2014

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Reference	Plan #3

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

Survey Tool Program **Date** 11/18/2014

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	13,855.2	Plan #3 (DD)	Geolink MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S17-T2N-R67W (Big Horn)						
ALVIN-STATE 1 (EXISTING) - MERIT ENERGY - NO SU	7,134.2	7,077.3	605.6	579.4	23.060	CC, ES
ALVIN-STATE 1 (EXISTING) - MERIT ENERGY - NO SU	7,250.0	7,184.2	612.1	585.1	22.701	SF
Bighorn 4A-17H-P267 - DD - Plan #2	200.0	200.0	109.9	109.3	185.179	CC, ES
Bighorn 4A-17H-P267 - DD - Plan #2	700.0	670.3	188.8	186.5	82.181	SF
Bighorn 4B-17H-P267 - DD - Plan #4	200.0	200.0	100.1	99.5	168.687	CC, ES
Bighorn 4B-17H-P267 - DD - Plan #4	700.0	675.1	171.7	169.4	74.624	SF
Bighorn 4C-17H-P267 - DD - Plan #3	200.0	200.0	90.0	89.4	151.725	CC, ES
Bighorn 4C-17H-P267 - DD - Plan #3	600.0	586.6	131.8	129.8	67.106	SF
Bighorn 4D-17H-P267 - DD - Plan #1	200.0	200.0	80.0	79.4	134.763	CC, ES
Bighorn 4D-17H-P267 - DD - Plan #1	700.0	686.9	134.4	132.0	57.245	SF
Bighorn 4E-17H-P267 - DD - Plan #1	200.0	200.0	69.9	69.3	117.801	CC, ES
Bighorn 4E-17H-P267 - DD - Plan #1	700.0	690.7	118.8	116.5	50.614	SF
Bighorn 4F-17H-P267 - DD - Plan #3	200.0	200.0	60.1	59.5	101.306	CC, ES
Bighorn 4F-17H-P267 - DD - Plan #3	700.0	693.9	104.7	102.3	44.681	SF
Bighorn 4G-17H-P267 - DD - Plan #2	200.0	200.0	50.1	49.5	84.344	CC, ES
Bighorn 4G-17H-P267 - DD - Plan #2	700.0	696.3	91.6	89.3	39.177	SF
Bighorn 4H-17H-P267 - DD - Plan #2	200.0	200.0	40.0	39.4	67.382	CC, ES
Bighorn 4H-17H-P267 - DD - Plan #2	13,855.2	14,716.4	901.1	667.3	3.854	SF
Bighorn 4I-17H-P267 - DD - Plan #4	200.0	200.0	29.9	29.3	50.420	CC, ES
Bighorn 4I-17H-P267 - DD - Plan #4	13,855.2	14,506.9	712.5	490.8	3.215	SF
Bighorn 4J-17H-P267 - DD - Plan #3	200.0	200.0	19.9	19.3	33.459	CC, ES
Bighorn 4J-17H-P267 - DD - Plan #3	13,855.2	13,789.1	463.1	230.1	1.988	SF
Bighorn 4K-17H-P267 - DD - Plan #2	200.0	200.0	10.1	9.5	16.963	CC, ES
Bighorn 4K-17H-P267 - DD - Plan #2	13,855.2	13,596.6	323.9	157.6	1.948	SF
DECHANT 7 (EXISTING) - FOUNDATION - NO SURVEY						Out of range
DECHANT STATE V 16-12JI (EXISTING) - KMG - NO SU	8,521.6	7,482.0	383.7	344.5	9.781	CC, ES
DECHANT STATE V 16-12JI (EXISTING) - KMG - NO SU	8,600.0	7,482.0	391.6	351.2	9.684	SF
DECHANT STATE V 16-4JI (EXISTING) - KMG - NO SU	11,051.9	7,471.0	621.7	540.2	7.626	CC, ES
DECHANT STATE V 16-4JI (EXISTING) - KMG - NO SU	11,100.0	7,471.0	623.6	541.2	7.571	SF
DECHANT STATE V 16-5JI (EXISTING) - KMG - NO SU	9,559.8	7,487.0	383.6	327.5	6.838	CC, ES
DECHANT STATE V 16-5JI (EXISTING) - KMG - NO SU	9,600.0	7,487.0	385.7	329.0	6.794	SF
DECHANT-STATE 3 (EXISTING) - FOUNDATION - NO S	5,234.8	5,100.0	806.6	788.0	43.469	CC, ES
DECHANT-STATE 3 (EXISTING) - FOUNDATION - NO S	5,300.0	5,100.0	809.2	790.5	43.325	SF
DECHANT-STATE 5 (EXISTING) - FOUNDATION - NO S						Out of range
DECHANT-STATE 9 (EXISTING) - KMG - NO SURVEYS	7,380.0	7,303.4	862.6	836.2	32.675	CC, ES
DECHANT-STATE 9 (EXISTING) - KMG - NO SURVEYS	7,550.0	7,414.7	876.6	849.0	31.738	SF
DIER 1 (EXISTING) - ENCANA WELL - GYRO	13,698.1	7,432.7	719.4	592.6	5.676	CC
DIER 1 (EXISTING) - ENCANA WELL - GYRO	13,700.0	7,432.8	719.4	592.6	5.674	ES
DIER 1 (EXISTING) - ENCANA WELL - GYRO	13,800.0	7,433.6	726.5	598.0	5.653	SF
DIER 33-8 (EXISTING) - ENCANA WELL - GYRO						Out of range
DIER 34-8 (EXISTING) - ENCANA WELL - GYRO						Out of range
DIER 44-8 (EXISTING) - ENCANA WELL - GYRO	12,081.1	7,487.0	627.8	528.4	6.319	CC
DIER 44-8 (EXISTING) - ENCANA WELL - GYRO	12,100.0	7,486.6	628.1	528.4	6.301	ES
DIER 44-8 (EXISTING) - ENCANA WELL - GYRO	12,200.0	7,484.7	638.9	537.5	6.300	SF
DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEY						Out of range
DIER 4-8 (EXISTING) - ENCANA - GYRO						Out of range
DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS	13,855.2	7,545.2	387.1	255.6	2.943	CC, ES, SF
DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS	12,933.3	7,568.4	127.4	7.3	1.061	Level 2, CC, ES, SF
DIER J 1-A (EXISTING) - ENCANA WELL - GYRO						Out of range
MILLER 1 (EXISTING) - SUNDANCE WELL - GYRO						Out of range
MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MILLER 13-17J (EXISTING) - DD - Plan #1						Out of range
MILLER 13-17J (EXISTING) - DD - SURVEYS						Out of range

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S17-T2N-R67W (Big Horn)						
MILLER 2-17 (EXISTING) - ENCANA WELL - GYRO						Out of range
MILLER 23-17J (EXISTING) - DD - Plan #1						Out of range
MILLER 23-17J (EXISTING) - DD - SURVEYS						Out of range
MILLER 2-4-17 (EXISTING) - DD - Plan #1						Out of range
MILLER 2-4-17 (EXISTING) - DD - SURVEYS						Out of range
MILLER 31-17C (EXISTING) - SUNDANCE WELL - GYR						Out of range
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	200.0	170.0	621.5	620.9	1,046.905	CC, ES
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	3,900.0	3,843.6	992.9	978.8	70.217	SF
MILLER 32-17 (EXISTING) SUNDANCE - SUNDANCE W						Out of range
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	200.0	174.0	765.8	765.2	1,275.141	CC, ES
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	2,100.0	2,041.6	991.6	984.4	138.027	SF
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	200.0	174.0	790.1	789.5	1,315.711	CC, ES
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	1,900.0	1,851.8	989.5	983.0	152.043	SF
MILLER 41-17 (EXISTING) - SUNDANCE WELL - GYRO						Out of range
MILLER 42-17 (EXISTING) - SUNDANCE WELL - NO SU						Out of range
MILLER 43-17 (EXISTING) - SUNDANCE - NO SURVEY						Out of range
MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVE	8,357.3	7,476.0	796.5	759.7	21.683	CC, ES
MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVE	8,600.0	7,476.0	832.6	792.2	20.595	SF
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	200.0	174.0	739.6	739.0	1,231.495	CC, ES
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	7,050.0	7,281.9	828.7	797.7	26.781	SF
MILLER CJ1A-17 (EXISTING) - DD - SURVEYS						Out of range
OWENS 44-8 (EXISTING) - KPK WELL - SURVEYS						Out of range
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	200.0	177.0	746.2	745.6	1,231.670	CC, ES
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	2,600.0	2,560.5	994.8	985.5	107.155	SF
PACE 2 (EXISTING) - TEXAS TEA OIL - NO SURVEYS						Out of range
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	1,582.3	1,553.6	157.9	151.4	24.132	CC
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	1,600.0	1,571.1	157.9	151.3	23.845	ES
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	2,400.0	2,365.0	187.3	177.6	19.247	SF
SATER 21-8 (EXISTING) - KERRMCGEE WELL - SURV						Out of range
SATER 24-8 (EXISTING) - KERRMCGEE WELL - SURV						Out of range
SATER 2-8 (EXISTING) - KERRMCGEE WELL - SURVE						Out of range
SATER 28-8 (EXISTING) - KERRMCGEE WELL - SURV						Out of range
SATER 7-8 (EXISTING) - KERRMCGEE WELL - SURVE						Out of range
SATER 8-8 (EXISTING) - KERRMCGEE WELL - SURVE						Out of range
STANLEY 2 (EXISTING) - GERRITY OIL - NO SURVEYS	5,266.4	5,175.0	734.5	715.4	38.393	CC, ES
STANLEY 2 (EXISTING) - GERRITY OIL - NO SURVEYS	5,300.0	5,175.0	735.3	716.1	38.302	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - ALVIN-STATE 1 (EXISTING) - MERIT ENERGY - NO SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 7650-Geolink MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
3,800.0	3,774.4	3,770.4	3,770.4	10.0	6.6	13.11	-228.0	1,385.5	990.1	976.7	13.36	74.136	
3,900.0	3,873.6	3,869.6	3,869.6	10.3	6.8	13.27	-228.0	1,385.5	978.1	964.4	13.71	71.319	
4,000.0	3,972.9	3,968.9	3,968.9	10.5	6.9	13.44	-228.0	1,385.5	966.1	952.0	14.07	68.643	
4,100.0	4,072.1	4,068.1	4,068.1	10.8	7.1	13.61	-228.0	1,385.5	954.1	939.7	14.43	66.099	
4,200.0	4,171.3	4,167.3	4,167.3	11.1	7.3	13.79	-228.0	1,385.5	942.2	927.4	14.80	63.677	
4,300.0	4,270.6	4,266.6	4,266.6	11.4	7.4	13.97	-228.0	1,385.5	930.2	915.0	15.16	61.368	
4,400.0	4,369.8	4,365.8	4,365.8	11.7	7.6	14.16	-228.0	1,385.5	918.3	902.7	15.52	59.166	
4,500.0	4,469.1	4,465.1	4,465.1	11.9	7.8	14.35	-228.0	1,385.5	906.3	890.4	15.88	57.061	
4,600.0	4,568.3	4,564.3	4,564.3	12.2	8.0	14.54	-228.0	1,385.5	894.4	878.1	16.25	55.049	
4,700.0	4,667.5	4,663.5	4,663.5	12.5	8.1	14.74	-228.0	1,385.5	882.5	865.8	16.61	53.124	
4,800.0	4,766.8	4,762.8	4,762.8	12.8	8.3	14.95	-228.0	1,385.5	870.5	853.6	16.98	51.279	
4,900.0	4,866.0	4,862.0	4,862.0	13.0	8.5	15.16	-228.0	1,385.5	858.6	841.3	17.34	49.510	
5,000.0	4,965.3	4,961.3	4,961.3	13.3	8.7	15.38	-228.0	1,385.5	846.8	829.1	17.71	47.813	
5,100.0	5,064.5	5,060.5	5,060.5	13.6	8.8	15.60	-228.0	1,385.5	834.9	816.8	18.08	46.183	
5,200.0	5,163.7	5,159.7	5,159.7	13.9	9.0	15.83	-228.0	1,385.5	823.0	804.6	18.45	44.616	
5,300.0	5,263.0	5,259.0	5,259.0	14.2	9.2	16.07	-228.0	1,385.5	811.2	792.4	18.82	43.109	
5,400.0	5,362.2	5,358.2	5,358.2	14.4	9.4	16.31	-228.0	1,385.5	799.3	780.2	19.19	41.658	
5,500.0	5,461.4	5,457.4	5,457.4	14.7	9.5	16.56	-228.0	1,385.5	787.5	768.0	19.56	40.261	
5,600.0	5,560.7	5,556.7	5,556.7	15.0	9.7	16.82	-228.0	1,385.5	775.7	755.8	19.93	38.914	
5,700.0	5,659.9	5,655.9	5,655.9	15.3	9.9	17.09	-228.0	1,385.5	763.9	743.6	20.31	37.615	
5,800.0	5,759.2	5,755.2	5,755.2	15.5	10.0	17.37	-228.0	1,385.5	752.2	731.5	20.69	36.362	
5,900.0	5,858.4	5,854.4	5,854.4	15.8	10.2	17.65	-228.0	1,385.5	740.4	719.3	21.06	35.151	
6,000.0	5,957.6	5,953.6	5,953.6	16.1	10.4	17.94	-228.0	1,385.5	728.7	707.2	21.44	33.982	
6,100.0	6,056.9	6,052.9	6,052.9	16.4	10.6	18.25	-228.0	1,385.5	717.0	695.1	21.82	32.852	
6,200.0	6,156.1	6,152.1	6,152.1	16.7	10.7	18.56	-228.0	1,385.5	705.3	683.1	22.21	31.758	
6,300.0	6,255.4	6,251.4	6,251.4	16.9	10.9	18.88	-228.0	1,385.5	693.6	671.0	22.59	30.701	
6,400.0	6,354.6	6,350.6	6,350.6	17.2	11.1	19.22	-228.0	1,385.5	681.9	659.0	22.98	29.677	
6,500.0	6,453.8	6,449.8	6,449.8	17.5	11.3	19.56	-228.0	1,385.5	670.3	646.9	23.37	28.685	
6,600.0	6,553.1	6,549.1	6,549.1	17.8	11.4	19.92	-228.0	1,385.5	658.7	635.0	23.76	27.724	
6,700.0	6,652.3	6,648.3	6,648.3	18.0	11.6	20.29	-228.0	1,385.5	647.1	623.0	24.15	26.792	
6,800.0	6,751.6	6,747.6	6,747.6	18.3	11.8	20.68	-228.0	1,385.5	635.6	611.0	24.55	25.889	
6,900.0	6,850.8	6,846.8	6,846.8	18.6	11.9	21.08	-228.0	1,385.5	624.1	599.1	24.95	25.013	
6,979.0	6,929.1	6,925.1	6,925.1	18.8	12.1	21.40	-228.0	1,385.5	615.0	589.7	25.27	24.340	
7,000.0	6,950.0	6,946.0	6,946.0	18.9	12.1	38.23	-228.0	1,385.5	612.7	587.3	25.39	24.132	
7,050.0	6,999.5	6,995.5	6,995.5	19.0	12.2	67.69	-228.0	1,385.5	608.5	582.8	25.71	23.672	
7,100.0	7,048.4	7,044.4	7,044.4	19.2	12.3	83.37	-228.0	1,385.5	606.1	580.1	26.04	23.280	
7,134.2	7,081.3	7,077.3	7,077.3	19.3	12.4	90.00	-228.0	1,385.5	605.6	579.4	26.26	23.060	CC, ES
7,150.0	7,096.4	7,092.4	7,092.4	19.3	12.4	92.43	-228.0	1,385.5	605.7	579.4	26.37	22.973	
7,200.0	7,143.1	7,139.1	7,139.1	19.4	12.5	98.46	-228.0	1,385.5	607.6	580.9	26.68	22.773	
7,250.0	7,188.2	7,184.2	7,184.2	19.6	12.5	102.88	-228.0	1,385.5	612.1	585.1	26.96	22.701	SF
7,300.0	7,231.4	7,227.4	7,227.4	19.8	12.6	106.31	-228.0	1,385.5	619.5	592.3	27.19	22.780	
7,350.0	7,272.2	7,268.2	7,268.2	19.9	12.7	109.00	-228.0	1,385.5	630.0	602.6	27.36	23.024	
7,400.0	7,310.4	7,306.4	7,306.4	20.1	12.8	111.06	-228.0	1,385.5	643.9	616.4	27.47	23.443	
7,450.0	7,345.8	7,341.8	7,341.8	20.3	12.8	112.53	-228.0	1,385.5	661.3	633.8	27.52	24.034	
7,500.0	7,377.9	7,373.9	7,373.9	20.6	12.9	113.37	-228.0	1,385.5	682.4	654.9	27.54	24.781	
7,550.0	7,406.7	7,402.7	7,402.7	20.8	12.9	113.54	-228.0	1,385.5	707.1	679.6	27.57	25.652	
7,600.0	7,431.8	7,427.8	7,427.8	21.1	13.0	112.96	-228.0	1,385.5	735.3	707.6	27.64	26.601	
7,650.0	7,453.1	7,449.1	7,449.1	21.4	13.0	111.53	-228.0	1,385.5	766.7	738.9	27.81	27.569	
7,700.0	7,470.4	7,466.4	7,466.4	21.8	13.0	109.12	-228.0	1,385.5	801.1	772.9	28.12	28.492	
7,750.0	7,483.6	7,479.6	7,479.6	22.1	13.1	105.56	-228.0	1,385.5	838.0	809.4	28.58	29.323	
7,800.0	7,492.6	7,488.6	7,488.6	22.5	13.1	100.69	-228.0	1,385.5	877.2	848.0	29.19	30.054	
7,850.0	7,497.3	7,493.3	7,493.3	22.9	13.1	94.37	-228.0	1,385.5	918.1	888.2	29.86	30.741	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - ALVIN-STATE 1 (EXISTING) - MERIT ENERGY - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 7650-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,879.2	7,498.0	7,494.0	7,494.0	23.2	13.1	90.00	-228.0	1,385.5	942.6	912.4	30.24	31.170	
7,900.0	7,498.0	7,494.0	7,494.0	23.4	13.1	90.00	-228.0	1,385.5	960.3	929.8	30.49	31.493	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4A-17H-P267 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.62	0.7	-109.9	109.9				
100.0	100.0	100.0	100.0	0.1	0.1	-89.62	0.7	-109.9	109.9	109.6	0.24	449.719	
200.0	200.0	200.0	200.0	0.3	0.3	-89.62	0.7	-109.9	109.9	109.3	0.59	185.179	CC, ES
300.0	300.0	296.4	296.4	0.5	0.5	179.90	0.2	-111.4	113.2	112.3	0.94	120.928	
400.0	399.8	392.1	392.0	0.7	0.7	179.16	-1.4	-116.0	123.2	121.9	1.28	96.383	
500.0	499.5	486.6	486.1	0.9	0.9	178.16	-4.0	-123.4	139.8	138.2	1.62	86.391	
553.7	552.8	536.6	535.8	1.0	1.0	177.59	-5.7	-128.5	151.4	149.6	1.80	84.135	
600.0	598.7	579.3	578.2	1.2	1.1	177.10	-7.5	-133.6	162.6	160.6	1.96	83.051	
700.0	698.0	670.3	668.2	1.4	1.4	176.08	-11.9	-146.3	188.8	186.5	2.30	82.181	SF
800.0	797.2	759.8	756.2	1.7	1.7	175.11	-17.1	-161.4	218.1	215.5	2.64	82.705	
900.0	896.5	847.4	841.9	2.0	2.1	174.21	-23.1	-178.7	250.3	247.3	2.97	84.151	
1,000.0	995.7	937.9	929.9	2.2	2.5	173.38	-30.1	-198.7	284.8	281.5	3.32	85.891	
1,100.0	1,094.9	1,031.6	1,020.9	2.5	2.9	172.69	-37.3	-219.7	319.7	316.0	3.66	87.271	
1,200.0	1,194.2	1,125.3	1,111.9	2.8	3.3	172.14	-44.6	-240.6	354.5	350.5	4.01	88.428	
1,300.0	1,293.4	1,218.9	1,202.9	3.1	3.7	171.68	-51.8	-261.6	389.5	385.1	4.36	89.414	
1,400.0	1,392.7	1,312.6	1,293.9	3.3	4.1	171.30	-59.1	-282.5	424.4	419.7	4.70	90.262	
1,500.0	1,491.9	1,406.3	1,385.0	3.6	4.5	170.98	-66.4	-303.5	459.3	454.3	5.05	91.000	
1,600.0	1,591.1	1,499.9	1,476.0	3.9	5.0	170.70	-73.6	-324.4	494.3	488.9	5.39	91.649	
1,700.0	1,690.4	1,593.6	1,567.0	4.2	5.4	170.46	-80.9	-345.4	529.2	523.5	5.74	92.222	
1,800.0	1,789.6	1,687.3	1,658.0	4.4	5.8	170.25	-88.1	-366.3	564.2	558.1	6.08	92.733	
1,900.0	1,888.9	1,781.0	1,749.0	4.7	6.2	170.07	-95.4	-387.2	599.2	592.7	6.43	93.191	
2,000.0	1,988.1	1,874.6	1,840.0	5.0	6.7	169.90	-102.7	-408.2	634.1	627.4	6.77	93.604	
2,100.0	2,087.3	1,968.3	1,931.0	5.3	7.1	169.75	-109.9	-429.1	669.1	662.0	7.12	93.978	
2,200.0	2,186.6	2,062.0	2,022.0	5.5	7.5	169.62	-117.2	-450.1	704.1	696.6	7.47	94.319	
2,300.0	2,285.8	2,155.6	2,113.0	5.8	7.9	169.50	-124.5	-471.0	739.1	731.3	7.81	94.630	
2,400.0	2,385.0	2,249.3	2,204.0	6.1	8.4	169.39	-131.7	-492.0	774.1	765.9	8.16	94.916	
2,500.0	2,484.3	2,343.0	2,295.0	6.4	8.8	169.29	-139.0	-512.9	809.1	800.6	8.50	95.179	
2,600.0	2,583.5	2,436.6	2,386.0	6.7	9.2	169.20	-146.2	-533.9	844.1	835.2	8.85	95.422	
2,700.0	2,682.8	2,530.3	2,477.0	6.9	9.7	169.11	-153.5	-554.8	879.1	869.9	9.19	95.648	
2,800.0	2,782.0	2,624.0	2,568.1	7.2	10.1	169.04	-160.8	-575.8	914.1	904.5	9.54	95.857	
2,900.0	2,881.2	2,717.6	2,659.1	7.5	10.5	168.96	-168.0	-596.7	949.1	939.2	9.88	96.052	
3,000.0	2,980.5	2,811.3	2,750.1	7.8	10.9	168.90	-175.3	-617.7	984.1	973.8	10.23	96.234	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.58	0.7	-100.1	100.1				
100.0	100.0	100.0	100.0	0.1	0.1	-89.58	0.7	-100.1	100.1	99.9	0.24	409.669	
200.0	200.0	200.0	200.0	0.3	0.3	-89.58	0.7	-100.1	100.1	99.5	0.59	168.687	CC, ES
300.0	300.0	298.4	298.4	0.5	0.5	-179.87	0.6	-100.5	102.2	101.3	0.94	108.853	
400.0	399.8	394.6	394.6	0.7	0.6	179.56	-0.5	-103.5	110.7	109.4	1.28	86.367	
500.0	499.5	489.7	489.5	0.9	0.8	178.63	-2.5	-109.6	125.7	124.1	1.62	77.538	
553.7	552.8	540.1	539.6	1.0	1.0	178.07	-4.1	-114.0	136.5	134.7	1.80	75.716	
600.0	598.7	583.2	582.4	1.2	1.1	177.58	-5.6	-118.4	146.9	144.9	1.96	74.952	
700.0	698.0	675.1	673.6	1.4	1.3	176.53	-9.6	-129.9	171.7	169.4	2.30	74.624	SF
800.0	797.2	765.5	762.7	1.7	1.6	175.51	-14.4	-143.8	199.5	196.8	2.64	75.548	
900.0	896.5	854.2	849.8	2.0	1.9	174.57	-20.0	-160.1	230.2	227.2	2.98	77.319	
1,000.0	995.7	948.9	942.3	2.2	2.3	173.73	-26.5	-178.8	262.4	259.0	3.33	78.898	
1,100.0	1,094.9	1,043.5	1,034.8	2.5	2.7	173.07	-33.0	-197.4	294.6	290.9	3.67	80.203	
1,200.0	1,194.2	1,138.1	1,127.4	2.8	3.0	172.53	-39.4	-216.1	326.8	322.8	4.02	81.293	
1,300.0	1,293.4	1,232.7	1,219.9	3.1	3.4	172.10	-45.9	-234.8	359.1	354.7	4.37	82.219	
1,400.0	1,392.7	1,327.4	1,312.5	3.3	3.8	171.73	-52.3	-253.5	391.3	386.6	4.71	83.013	
1,500.0	1,491.9	1,422.0	1,405.0	3.6	4.2	171.42	-58.8	-272.1	423.6	418.5	5.06	83.703	
1,600.0	1,591.1	1,516.6	1,497.5	3.9	4.6	171.16	-65.3	-290.8	455.9	450.5	5.41	84.308	
1,700.0	1,690.4	1,611.2	1,590.1	4.2	4.9	170.93	-71.7	-309.5	488.2	482.4	5.75	84.841	
1,800.0	1,789.6	1,705.9	1,682.6	4.4	5.3	170.73	-78.2	-328.2	520.5	514.4	6.10	85.317	
1,900.0	1,888.9	1,800.5	1,775.2	4.7	5.7	170.55	-84.6	-346.8	552.8	546.4	6.45	85.742	
2,000.0	1,988.1	1,895.1	1,867.7	5.0	6.1	170.39	-91.1	-365.5	585.1	578.3	6.79	86.125	
2,100.0	2,087.3	1,989.7	1,960.2	5.3	6.5	170.25	-97.6	-384.2	617.4	610.3	7.14	86.472	
2,200.0	2,186.6	2,084.4	2,052.8	5.5	6.9	170.12	-104.0	-402.8	649.8	642.3	7.49	86.787	
2,300.0	2,285.8	2,179.0	2,145.3	5.8	7.3	170.01	-110.5	-421.5	682.1	674.2	7.83	87.075	
2,400.0	2,385.0	2,273.6	2,237.8	6.1	7.6	169.90	-116.9	-440.2	714.4	706.2	8.18	87.339	
2,500.0	2,484.3	2,368.2	2,330.4	6.4	8.0	169.80	-123.4	-458.9	746.7	738.2	8.53	87.582	
2,600.0	2,583.5	2,462.8	2,422.9	6.7	8.4	169.72	-129.9	-477.5	779.1	770.2	8.87	87.806	
2,700.0	2,682.8	2,557.5	2,515.5	6.9	8.8	169.64	-136.3	-496.2	811.4	802.2	9.22	88.014	
2,800.0	2,782.0	2,652.1	2,608.0	7.2	9.2	169.56	-142.8	-514.9	843.7	834.2	9.57	88.207	
2,900.0	2,881.2	2,746.7	2,700.5	7.5	9.6	169.49	-149.2	-533.6	876.1	866.1	9.91	88.387	
3,000.0	2,980.5	2,841.3	2,793.1	7.8	10.0	169.43	-155.7	-552.2	908.4	898.1	10.26	88.555	
3,100.0	3,079.7	2,936.0	2,885.6	8.0	10.3	169.37	-162.2	-570.9	940.7	930.1	10.60	88.712	
3,200.0	3,179.0	3,030.6	2,978.1	8.3	10.7	169.31	-168.6	-589.6	973.1	962.1	10.95	88.859	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #3

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.54	0.7	-90.0	90.0				
100.0	100.0	100.0	100.0	0.1	0.1	-89.54	0.7	-90.0	90.0	89.8	0.24	368.476	
200.0	200.0	200.0	200.0	0.3	0.3	-89.54	0.7	-90.0	90.0	89.4	0.59	151.725	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-179.75	0.7	-90.0	91.8	90.8	0.94	97.421	
400.0	399.8	396.7	396.7	0.7	0.6	179.92	0.2	-91.6	98.6	97.3	1.28	76.773	
500.0	499.5	492.4	492.3	0.9	0.8	179.11	-1.4	-96.1	112.1	110.5	1.62	68.998	
553.7	552.8	543.2	542.9	1.0	0.9	178.58	-2.6	-99.8	122.0	120.2	1.81	67.576	
600.0	598.7	586.6	586.2	1.2	1.0	178.10	-3.9	-103.6	131.8	129.8	1.96	67.106	SF
700.0	698.0	679.4	678.3	1.4	1.3	177.03	-7.4	-113.8	155.0	152.7	2.30	67.282	
800.0	797.2	770.7	768.6	1.7	1.5	175.99	-11.7	-126.6	181.3	178.7	2.64	68.586	
900.0	896.5	863.2	859.7	2.0	1.8	175.01	-17.0	-142.0	210.3	207.4	2.99	70.436	
1,000.0	995.7	958.7	953.6	2.2	2.2	174.22	-22.5	-158.3	239.8	236.5	3.33	71.932	
1,100.0	1,094.9	1,054.2	1,047.5	2.5	2.5	173.60	-28.1	-174.6	269.3	265.6	3.68	73.156	
1,200.0	1,194.2	1,149.8	1,141.5	2.8	2.8	173.10	-33.6	-190.9	298.8	294.8	4.03	74.177	
1,300.0	1,293.4	1,245.3	1,235.4	3.1	3.2	172.69	-39.2	-207.2	328.4	324.0	4.38	75.040	
1,400.0	1,392.7	1,340.8	1,329.4	3.3	3.5	172.35	-44.7	-223.5	357.9	353.2	4.72	75.780	
1,500.0	1,491.9	1,436.3	1,423.3	3.6	3.8	172.06	-50.3	-239.8	387.5	382.4	5.07	76.421	
1,600.0	1,591.1	1,531.8	1,517.3	3.9	4.2	171.81	-55.8	-256.1	417.1	411.7	5.42	76.982	
1,700.0	1,690.4	1,627.3	1,611.2	4.2	4.5	171.60	-61.4	-272.4	446.7	440.9	5.77	77.477	
1,800.0	1,789.6	1,722.8	1,705.2	4.4	4.9	171.41	-66.9	-288.7	476.2	470.1	6.11	77.916	
1,900.0	1,888.9	1,818.3	1,799.1	4.7	5.2	171.24	-72.5	-305.0	505.8	499.4	6.46	78.309	
2,000.0	1,988.1	1,913.8	1,893.1	5.0	5.6	171.09	-78.0	-321.3	535.4	528.6	6.81	78.663	
2,100.0	2,087.3	2,009.4	1,987.0	5.3	5.9	170.96	-83.6	-337.6	565.0	557.9	7.15	78.983	
2,200.0	2,186.6	2,104.9	2,081.0	5.5	6.2	170.84	-89.1	-353.9	594.6	587.1	7.50	79.274	
2,300.0	2,285.8	2,200.4	2,174.9	5.8	6.6	170.73	-94.7	-370.2	624.2	616.4	7.85	79.539	
2,400.0	2,385.0	2,295.9	2,268.9	6.1	6.9	170.64	-100.2	-386.5	653.8	645.6	8.20	79.782	
2,500.0	2,484.3	2,391.4	2,362.8	6.4	7.3	170.55	-105.8	-402.8	683.4	674.9	8.54	80.006	
2,600.0	2,583.5	2,486.9	2,456.7	6.7	7.6	170.46	-111.3	-419.1	713.0	704.1	8.89	80.212	
2,700.0	2,682.8	2,582.4	2,550.7	6.9	8.0	170.39	-116.9	-435.4	742.6	733.4	9.24	80.403	
2,800.0	2,782.0	2,677.9	2,644.6	7.2	8.3	170.32	-122.4	-451.7	772.3	762.7	9.58	80.580	
2,900.0	2,881.2	2,773.5	2,738.6	7.5	8.7	170.25	-128.0	-468.0	801.9	791.9	9.93	80.745	
3,000.0	2,980.5	2,869.0	2,832.5	7.8	9.0	170.19	-133.5	-484.4	831.5	821.2	10.28	80.899	
3,100.0	3,079.7	2,964.5	2,926.5	8.0	9.4	170.14	-139.1	-500.7	861.1	850.5	10.62	81.043	
3,200.0	3,179.0	3,060.0	3,020.4	8.3	9.7	170.08	-144.6	-517.0	890.7	879.7	10.97	81.178	
3,300.0	3,278.2	3,155.5	3,114.4	8.6	10.0	170.04	-150.2	-533.3	920.3	909.0	11.32	81.305	
3,400.0	3,377.4	3,251.0	3,208.3	8.9	10.4	169.99	-155.7	-549.6	949.9	938.2	11.67	81.424	
3,500.0	3,476.7	3,346.5	3,302.3	9.2	10.7	169.95	-161.3	-565.9	979.5	967.5	12.01	81.536	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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	-89.49	0.7	-80.0	80.0				
100.0	100.0	100.0	100.0	0.1	0.1	-89.49	0.7	-80.0	80.0	79.7	0.24	327.282	
200.0	200.0	200.0	200.0	0.3	0.3	-89.49	0.7	-80.0	80.0	79.4	0.59	134.763	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-179.70	0.7	-80.0	81.7	80.8	0.94	86.737	
400.0	399.8	398.8	398.8	0.7	0.6	-179.93	0.4	-80.2	87.2	85.9	1.29	67.730	
500.0	499.5	496.1	496.0	0.9	0.8	178.63	-2.0	-82.5	98.3	96.6	1.63	60.184	
553.7	552.8	547.8	547.6	1.0	0.9	177.48	-4.3	-84.6	106.6	104.8	1.82	58.549	
600.0	598.7	592.1	591.8	1.2	1.0	176.37	-6.8	-86.9	114.8	112.8	1.98	57.860	
700.0	698.0	686.9	686.2	1.4	1.2	173.79	-13.9	-93.3	134.4	132.0	2.35	57.245	SF
800.0	797.2	780.5	778.9	1.7	1.5	171.14	-23.1	-101.8	156.7	154.0	2.72	57.548	
900.0	896.5	872.7	869.8	2.0	1.8	168.57	-34.3	-112.1	181.8	178.7	3.11	58.536	
1,000.0	995.7	968.4	963.9	2.2	2.1	166.26	-47.3	-124.0	208.6	205.1	3.50	59.594	
1,100.0	1,094.9	1,064.4	1,058.3	2.5	2.4	164.46	-60.3	-135.9	235.7	231.8	3.90	60.494	
1,200.0	1,194.2	1,160.5	1,152.7	2.8	2.7	163.03	-73.3	-147.8	263.0	258.7	4.29	61.264	
1,300.0	1,293.4	1,256.5	1,247.1	3.1	3.1	161.88	-86.3	-159.8	290.4	285.7	4.69	61.930	
1,400.0	1,392.7	1,352.5	1,341.4	3.3	3.4	160.92	-99.3	-171.7	317.8	312.8	5.08	62.512	
1,500.0	1,491.9	1,448.5	1,435.8	3.6	3.8	160.11	-112.3	-183.6	345.4	339.9	5.48	63.024	
1,600.0	1,591.1	1,544.6	1,530.2	3.9	4.1	159.42	-125.3	-195.5	373.0	367.1	5.88	63.477	
1,700.0	1,690.4	1,640.6	1,624.6	4.2	4.5	158.83	-138.3	-207.4	400.6	394.3	6.27	63.881	
1,800.0	1,789.6	1,736.6	1,719.0	4.4	4.8	158.32	-151.3	-219.4	428.3	421.6	6.67	64.243	
1,900.0	1,888.9	1,832.6	1,813.4	4.7	5.2	157.86	-164.3	-231.3	456.0	448.9	7.06	64.569	
2,000.0	1,988.1	1,928.7	1,907.8	5.0	5.5	157.46	-177.3	-243.2	483.7	476.3	7.46	64.865	
2,100.0	2,087.3	2,024.7	2,002.2	5.3	5.9	157.10	-190.3	-255.1	511.5	503.6	7.85	65.134	
2,200.0	2,186.6	2,120.7	2,096.6	5.5	6.2	156.78	-203.3	-267.1	539.2	531.0	8.25	65.380	
2,300.0	2,285.8	2,216.8	2,191.0	5.8	6.5	156.49	-216.3	-279.0	567.0	558.4	8.64	65.605	
2,400.0	2,385.0	2,312.8	2,285.4	6.1	6.9	156.23	-229.3	-290.9	594.8	585.8	9.04	65.812	
2,500.0	2,484.3	2,408.8	2,379.8	6.4	7.2	155.99	-242.3	-302.8	622.6	613.2	9.43	66.004	
2,600.0	2,583.5	2,504.8	2,474.2	6.7	7.6	155.77	-255.3	-314.8	650.4	640.6	9.83	66.181	
2,700.0	2,682.8	2,600.9	2,568.6	6.9	8.0	155.57	-268.2	-326.7	678.2	668.0	10.22	66.345	
2,800.0	2,782.0	2,696.9	2,663.0	7.2	8.3	155.38	-281.2	-338.6	706.0	695.4	10.62	66.498	
2,900.0	2,881.2	2,792.9	2,757.4	7.5	8.7	155.21	-294.2	-350.5	733.9	722.9	11.01	66.641	
3,000.0	2,980.5	2,888.9	2,851.7	7.8	9.0	155.05	-307.2	-362.4	761.7	750.3	11.41	66.774	
3,100.0	3,079.7	2,985.0	2,946.1	8.0	9.4	154.91	-320.2	-374.4	789.5	777.7	11.80	66.899	
3,200.0	3,179.0	3,081.0	3,040.5	8.3	9.7	154.77	-333.2	-386.3	817.4	805.2	12.20	67.017	
3,300.0	3,278.2	3,177.0	3,134.9	8.6	10.1	154.64	-346.2	-398.2	845.2	832.6	12.59	67.127	
3,400.0	3,377.4	3,273.1	3,229.3	8.9	10.4	154.52	-359.2	-410.1	873.1	860.1	12.99	67.232	
3,500.0	3,476.7	3,369.1	3,323.7	9.2	10.8	154.41	-372.2	-422.1	900.9	887.6	13.38	67.330	
3,600.0	3,575.9	3,465.1	3,418.1	9.4	11.1	154.30	-385.2	-434.0	928.8	915.0	13.78	67.423	
3,700.0	3,675.2	3,561.1	3,512.5	9.7	11.5	154.20	-398.2	-445.9	956.7	942.5	14.17	67.511	
3,800.0	3,774.4	3,657.2	3,606.9	10.0	11.8	154.11	-411.2	-457.8	984.5	970.0	14.57	67.595	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4E-17H-P267 - DD - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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	-89.42	0.7	-69.9	69.9				
100.0	100.0	100.0	100.0	0.1	0.1	-89.42	0.7	-69.9	69.9	69.7	0.24	286.089	
200.0	200.0	200.0	200.0	0.3	0.3	-89.42	0.7	-69.9	69.9	69.3	0.59	117.801	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-179.64	0.7	-69.9	71.6	70.7	0.94	76.053	
400.0	399.8	399.8	399.8	0.7	0.6	-179.66	0.7	-69.9	76.9	75.6	1.29	59.617	
500.0	499.5	497.8	497.8	0.9	0.8	179.38	-0.7	-70.8	86.6	84.9	1.63	52.978	
553.7	552.8	550.0	549.9	1.0	0.9	178.27	-2.5	-72.1	94.0	92.2	1.82	51.619	
600.0	598.7	594.8	594.6	1.2	1.0	177.12	-4.8	-73.6	101.3	99.4	1.98	51.080	
700.0	698.0	690.7	690.3	1.4	1.2	174.22	-11.5	-78.2	118.8	116.5	2.35	50.614	SF
800.0	797.2	785.7	784.5	1.7	1.4	171.09	-20.7	-84.5	138.8	136.1	2.73	50.879	
900.0	896.5	879.3	877.0	2.0	1.7	167.97	-32.3	-92.5	161.4	158.2	3.12	51.667	
1,000.0	995.7	975.2	971.5	2.2	2.0	165.11	-45.9	-101.8	185.9	182.3	3.53	52.657	
1,100.0	1,094.9	1,071.8	1,066.7	2.5	2.3	162.90	-59.6	-111.1	210.7	206.8	3.94	53.494	
1,200.0	1,194.2	1,168.3	1,161.8	2.8	2.6	161.15	-73.3	-120.5	235.8	231.5	4.35	54.215	
1,300.0	1,293.4	1,264.9	1,256.9	3.1	2.9	159.73	-87.0	-129.9	261.1	256.4	4.76	54.843	
1,400.0	1,392.7	1,361.5	1,352.1	3.3	3.3	158.57	-100.7	-139.3	286.5	281.3	5.17	55.394	
1,500.0	1,491.9	1,458.0	1,447.2	3.6	3.6	157.59	-114.5	-148.7	312.0	306.4	5.58	55.880	
1,600.0	1,591.1	1,554.6	1,542.3	3.9	3.9	156.76	-128.2	-158.0	337.6	331.6	5.99	56.312	
1,700.0	1,690.4	1,651.2	1,637.4	4.2	4.3	156.05	-141.9	-167.4	363.2	356.8	6.41	56.698	
1,800.0	1,789.6	1,747.7	1,732.6	4.4	4.6	155.44	-155.6	-176.8	388.9	382.1	6.82	57.044	
1,900.0	1,888.9	1,844.3	1,827.7	4.7	4.9	154.89	-169.3	-186.2	414.6	407.4	7.23	57.357	
2,000.0	1,988.1	1,940.9	1,922.8	5.0	5.2	154.42	-183.0	-195.5	440.3	432.7	7.64	57.641	
2,100.0	2,087.3	2,037.5	2,018.0	5.3	5.6	153.99	-196.7	-204.9	466.1	458.0	8.05	57.900	
2,200.0	2,186.6	2,134.0	2,113.1	5.5	5.9	153.61	-210.4	-214.3	491.9	483.4	8.46	58.136	
2,300.0	2,285.8	2,230.6	2,208.2	5.8	6.2	153.27	-224.2	-223.7	517.7	508.8	8.87	58.353	
2,400.0	2,385.0	2,327.2	2,303.4	6.1	6.6	152.96	-237.9	-233.0	543.5	534.2	9.28	58.553	
2,500.0	2,484.3	2,423.7	2,398.5	6.4	6.9	152.68	-251.6	-242.4	569.3	559.6	9.69	58.738	
2,600.0	2,583.5	2,520.3	2,493.6	6.7	7.2	152.42	-265.3	-251.8	595.2	585.1	10.10	58.909	
2,700.0	2,682.8	2,616.9	2,588.7	6.9	7.6	152.18	-279.0	-261.2	621.0	610.5	10.51	59.068	
2,800.0	2,782.0	2,713.4	2,683.9	7.2	7.9	151.96	-292.7	-270.6	646.9	635.9	10.92	59.216	
2,900.0	2,881.2	2,810.0	2,779.0	7.5	8.2	151.76	-306.4	-279.9	672.7	661.4	11.33	59.354	
3,000.0	2,980.5	2,906.6	2,874.1	7.8	8.6	151.58	-320.1	-289.3	698.6	686.9	11.74	59.483	
3,100.0	3,079.7	3,003.2	2,969.3	8.0	8.9	151.41	-333.9	-298.7	724.5	712.3	12.16	59.605	
3,200.0	3,179.0	3,099.7	3,064.4	8.3	9.3	151.24	-347.6	-308.1	750.4	737.8	12.57	59.718	
3,300.0	3,278.2	3,196.3	3,159.5	8.6	9.6	151.09	-361.3	-317.4	776.3	763.3	12.98	59.826	
3,400.0	3,377.4	3,292.9	3,254.7	8.9	9.9	150.95	-375.0	-326.8	802.2	788.8	13.39	59.927	
3,500.0	3,476.7	3,389.4	3,349.8	9.2	10.3	150.82	-388.7	-336.2	828.1	814.3	13.80	60.022	
3,600.0	3,575.9	3,486.0	3,444.9	9.4	10.6	150.70	-402.4	-345.6	854.0	839.8	14.21	60.112	
3,700.0	3,675.2	3,582.6	3,540.1	9.7	10.9	150.58	-416.1	-355.0	879.9	865.3	14.62	60.198	
3,800.0	3,774.4	3,679.1	3,635.2	10.0	11.3	150.47	-429.8	-364.3	905.8	890.8	15.03	60.279	
3,900.0	3,873.6	3,775.7	3,730.3	10.3	11.6	150.37	-443.5	-373.7	931.7	916.3	15.44	60.356	
4,000.0	3,972.9	3,872.3	3,825.4	10.5	11.9	150.27	-457.3	-383.1	957.7	941.8	15.85	60.429	
4,100.0	4,072.1	3,968.9	3,920.6	10.8	12.3	150.18	-471.0	-392.5	983.6	967.3	16.26	60.499	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4F-17H-P267 - DD - Plan #3

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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	-89.64	0.4	-60.1	60.1				
100.0	100.0	100.0	100.0	0.1	0.1	-89.64	0.4	-60.1	60.1	59.9	0.24	246.029	
200.0	200.0	200.0	200.0	0.3	0.3	-89.64	0.4	-60.1	60.1	59.5	0.59	101.306	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-179.86	0.4	-60.1	61.9	60.9	0.94	65.663	
400.0	399.8	399.8	399.8	0.7	0.6	-179.87	0.4	-60.1	67.1	65.8	1.29	52.027	
500.0	499.5	498.9	498.9	0.9	0.8	179.83	0.0	-60.3	76.0	74.3	1.63	46.489	
553.7	552.8	551.6	551.6	1.0	0.9	178.96	-1.3	-60.9	82.7	80.9	1.82	45.426	
600.0	598.7	596.8	596.7	1.2	1.0	177.87	-3.1	-61.7	89.2	87.3	1.98	45.033	
700.0	698.0	693.9	693.6	1.4	1.2	174.82	-9.1	-64.4	104.7	102.3	2.34	44.681	SF
800.0	797.2	790.2	789.4	1.7	1.4	171.25	-18.0	-68.4	122.1	119.4	2.72	44.837	
900.0	896.5	885.3	883.6	2.0	1.6	167.52	-29.7	-73.7	141.9	138.7	3.13	45.382	
1,000.0	995.7	982.4	979.6	2.2	1.9	164.14	-43.3	-79.9	163.2	159.7	3.54	46.054	
1,100.0	1,094.9	1,079.7	1,075.8	2.5	2.2	161.54	-56.8	-86.0	185.0	181.0	3.97	46.642	
1,200.0	1,194.2	1,177.0	1,171.9	2.8	2.5	159.48	-70.4	-92.2	207.0	202.7	4.39	47.158	
1,300.0	1,293.4	1,274.3	1,268.1	3.1	2.8	157.83	-84.0	-98.3	229.3	224.5	4.82	47.613	
1,400.0	1,392.7	1,371.6	1,364.2	3.3	3.1	156.46	-97.6	-104.5	251.7	246.5	5.24	48.017	
1,500.0	1,491.9	1,468.9	1,460.3	3.6	3.4	155.32	-111.2	-110.6	274.3	268.6	5.67	48.377	
1,600.0	1,591.1	1,566.2	1,556.5	3.9	3.7	154.35	-124.8	-116.8	296.9	290.8	6.10	48.699	
1,700.0	1,690.4	1,663.5	1,652.6	4.2	4.0	153.52	-138.3	-122.9	319.6	313.0	6.52	48.990	
1,800.0	1,789.6	1,760.8	1,748.8	4.4	4.3	152.79	-151.9	-129.0	342.3	335.4	6.95	49.252	
1,900.0	1,888.9	1,858.1	1,844.9	4.7	4.6	152.16	-165.5	-135.2	365.1	357.7	7.38	49.490	
2,000.0	1,988.1	1,955.4	1,941.1	5.0	4.9	151.60	-179.1	-141.3	387.9	380.1	7.80	49.707	
2,100.0	2,087.3	2,052.7	2,037.2	5.3	5.2	151.11	-192.7	-147.5	410.8	402.6	8.23	49.905	
2,200.0	2,186.6	2,150.0	2,133.4	5.5	5.5	150.67	-206.3	-153.6	433.7	425.0	8.66	50.087	
2,300.0	2,285.8	2,247.3	2,229.5	5.8	5.8	150.27	-219.8	-159.8	456.6	447.5	9.09	50.255	
2,400.0	2,385.0	2,344.6	2,325.7	6.1	6.1	149.91	-233.4	-165.9	479.5	470.0	9.51	50.410	
2,500.0	2,484.3	2,441.9	2,421.8	6.4	6.4	149.58	-247.0	-172.1	502.4	492.5	9.94	50.553	
2,600.0	2,583.5	2,539.1	2,517.9	6.7	6.7	149.28	-260.6	-178.2	525.4	515.0	10.37	50.686	
2,700.0	2,682.8	2,636.4	2,614.1	6.9	7.1	149.00	-274.2	-184.4	548.4	537.6	10.79	50.810	
2,800.0	2,782.0	2,733.7	2,710.2	7.2	7.4	148.75	-287.8	-190.5	571.3	560.1	11.22	50.925	
2,900.0	2,881.2	2,831.0	2,806.4	7.5	7.7	148.52	-301.3	-196.7	594.3	582.7	11.65	51.033	
3,000.0	2,980.5	2,928.3	2,902.5	7.8	8.0	148.30	-314.9	-202.8	617.3	605.3	12.07	51.135	
3,100.0	3,079.7	3,025.6	2,998.7	8.0	8.3	148.10	-328.5	-209.0	640.3	627.8	12.50	51.230	
3,200.0	3,179.0	3,122.9	3,094.8	8.3	8.6	147.92	-342.1	-215.1	663.3	650.4	12.93	51.319	
3,300.0	3,278.2	3,220.2	3,191.0	8.6	8.9	147.74	-355.7	-221.3	686.4	673.0	13.35	51.403	
3,400.0	3,377.4	3,317.5	3,287.1	8.9	9.2	147.58	-369.3	-227.4	709.4	695.6	13.78	51.483	
3,500.0	3,476.7	3,414.8	3,383.2	9.2	9.5	147.43	-382.8	-233.6	732.4	718.2	14.21	51.558	
3,600.0	3,575.9	3,512.1	3,479.4	9.4	9.8	147.29	-396.4	-239.7	755.4	740.8	14.63	51.629	
3,700.0	3,675.2	3,609.4	3,575.5	9.7	10.2	147.15	-410.0	-245.9	778.5	763.4	15.06	51.697	
3,800.0	3,774.4	3,706.7	3,671.7	10.0	10.5	147.03	-423.6	-252.0	801.5	786.0	15.49	51.761	
3,900.0	3,873.6	3,804.0	3,767.8	10.3	10.8	146.91	-437.2	-258.2	824.6	808.7	15.91	51.821	
4,000.0	3,972.9	3,901.3	3,864.0	10.5	11.1	146.79	-450.8	-264.3	847.6	831.3	16.34	51.879	
4,100.0	4,072.1	3,998.6	3,960.1	10.8	11.4	146.69	-464.3	-270.5	870.7	853.9	16.76	51.935	
4,200.0	4,171.3	4,095.9	4,056.3	11.1	11.7	146.58	-477.9	-276.6	893.7	876.5	17.19	51.987	
4,300.0	4,270.6	4,193.2	4,152.4	11.4	12.0	146.49	-491.5	-282.8	916.8	899.2	17.62	52.038	
4,400.0	4,369.8	4,290.5	4,248.6	11.7	12.3	146.40	-505.1	-288.9	939.8	921.8	18.04	52.086	
4,500.0	4,469.1	4,387.7	4,344.7	11.9	12.6	146.31	-518.7	-295.1	962.9	944.4	18.47	52.132	
4,600.0	4,568.3	4,485.0	4,440.8	12.2	12.9	146.22	-532.3	-301.2	986.0	967.1	18.90	52.176	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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	-89.58	0.4	-50.0	50.1				
100.0	100.0	100.0	100.0	0.1	0.1	-89.58	0.4	-50.0	50.1	49.8	0.24	204.835	
200.0	200.0	200.0	200.0	0.3	0.3	-89.58	0.4	-50.0	50.1	49.5	0.59	84.344	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-179.80	0.4	-50.0	51.8	50.9	0.94	54.979	
400.0	399.8	399.8	399.8	0.7	0.6	-179.82	0.4	-50.0	57.0	55.7	1.29	44.222	
500.0	499.5	499.5	499.5	0.9	0.8	-179.84	0.4	-50.0	65.7	64.1	1.64	40.204	
553.7	552.8	552.5	552.5	1.0	0.9	179.77	-0.1	-50.2	72.0	70.1	1.82	39.537	
600.0	598.7	598.1	598.1	1.2	1.0	178.92	-1.3	-50.4	78.0	76.0	1.98	39.343	
700.0	698.0	696.3	696.1	1.4	1.2	175.97	-6.2	-51.6	91.6	89.3	2.34	39.177	SF
800.0	797.2	793.8	793.3	1.7	1.4	172.09	-14.3	-53.5	106.6	103.9	2.72	39.254	
900.0	896.5	890.5	889.3	2.0	1.6	167.78	-25.5	-56.1	123.4	120.3	3.12	39.504	
1,000.0	995.7	987.6	985.3	2.2	1.9	163.53	-39.3	-59.4	142.0	138.5	3.55	39.964	
1,100.0	1,094.9	1,085.3	1,082.0	2.5	2.1	160.17	-53.5	-62.7	161.3	157.3	3.99	40.391	
1,200.0	1,194.2	1,183.0	1,178.6	2.8	2.4	157.53	-67.6	-66.0	181.1	176.6	4.44	40.789	
1,300.0	1,293.4	1,280.7	1,275.2	3.1	2.7	155.41	-81.7	-69.3	201.1	196.2	4.89	41.155	
1,400.0	1,392.7	1,378.5	1,371.9	3.3	3.0	153.67	-95.9	-72.7	221.4	216.1	5.34	41.491	
1,500.0	1,491.9	1,476.2	1,468.5	3.6	3.3	152.23	-110.0	-76.0	241.8	236.0	5.79	41.798	
1,600.0	1,591.1	1,573.9	1,565.1	3.9	3.6	151.01	-124.1	-79.3	262.4	256.1	6.24	42.078	
1,700.0	1,690.4	1,671.6	1,661.8	4.2	3.9	149.97	-138.3	-82.6	283.0	276.3	6.69	42.335	
1,800.0	1,789.6	1,769.4	1,758.4	4.4	4.2	149.07	-152.4	-86.0	303.8	296.6	7.14	42.570	
1,900.0	1,888.9	1,867.1	1,855.1	4.7	4.5	148.28	-166.6	-89.3	324.5	317.0	7.59	42.786	
2,000.0	1,988.1	1,964.8	1,951.7	5.0	4.8	147.59	-180.7	-92.6	345.4	337.3	8.04	42.984	
2,100.0	2,087.3	2,062.5	2,048.3	5.3	5.1	146.98	-194.8	-95.9	366.3	357.8	8.48	43.167	
2,200.0	2,186.6	2,160.3	2,145.0	5.5	5.4	146.43	-209.0	-99.2	387.2	378.2	8.93	43.336	
2,300.0	2,285.8	2,258.0	2,241.6	5.8	5.7	145.94	-223.1	-102.6	408.1	398.7	9.38	43.493	
2,400.0	2,385.0	2,355.7	2,338.3	6.1	6.0	145.50	-237.3	-105.9	429.1	419.3	9.83	43.638	
2,500.0	2,484.3	2,453.4	2,434.9	6.4	6.3	145.10	-251.4	-109.2	450.1	439.8	10.28	43.773	
2,600.0	2,583.5	2,551.2	2,531.5	6.7	6.6	144.73	-265.5	-112.5	471.1	460.4	10.73	43.899	
2,700.0	2,682.8	2,648.9	2,628.2	6.9	6.9	144.40	-279.7	-115.9	492.2	481.0	11.18	44.016	
2,800.0	2,782.0	2,746.6	2,724.8	7.2	7.2	144.09	-293.8	-119.2	513.2	501.6	11.63	44.127	
2,900.0	2,881.2	2,844.3	2,821.5	7.5	7.5	143.81	-307.9	-122.5	534.3	522.2	12.08	44.230	
3,000.0	2,980.5	2,942.1	2,918.1	7.8	7.8	143.55	-322.1	-125.8	555.3	542.8	12.53	44.327	
3,100.0	3,079.7	3,039.8	3,014.7	8.0	8.1	143.31	-336.2	-129.2	576.4	563.4	12.98	44.418	
3,200.0	3,179.0	3,137.5	3,111.4	8.3	8.4	143.08	-350.4	-132.5	597.5	584.1	13.43	44.504	
3,300.0	3,278.2	3,235.2	3,208.0	8.6	8.7	142.87	-364.5	-135.8	618.6	604.7	13.87	44.585	
3,400.0	3,377.4	3,333.0	3,304.7	8.9	9.0	142.67	-378.6	-139.1	639.7	625.4	14.32	44.662	
3,500.0	3,476.7	3,430.7	3,401.3	9.2	9.3	142.49	-392.8	-142.4	660.8	646.1	14.77	44.735	
3,600.0	3,575.9	3,528.4	3,497.9	9.4	9.6	142.32	-406.9	-145.8	681.9	666.7	15.22	44.804	
3,700.0	3,675.2	3,626.1	3,594.6	9.7	9.9	142.16	-421.1	-149.1	703.1	687.4	15.67	44.869	
3,800.0	3,774.4	3,723.8	3,691.2	10.0	10.2	142.01	-435.2	-152.4	724.2	708.1	16.12	44.931	
3,900.0	3,873.6	3,821.6	3,787.8	10.3	10.5	141.86	-449.3	-155.7	745.3	728.8	16.57	44.991	
4,000.0	3,972.9	3,919.3	3,884.5	10.5	10.8	141.73	-463.5	-159.1	766.5	749.5	17.02	45.047	
4,100.0	4,072.1	4,017.0	3,981.1	10.8	11.1	141.60	-477.6	-162.4	787.6	770.2	17.46	45.101	
4,200.0	4,171.3	4,114.7	4,077.8	11.1	11.4	141.48	-491.7	-165.7	808.8	790.9	17.91	45.152	
4,300.0	4,270.6	4,212.5	4,174.4	11.4	11.7	141.36	-505.9	-169.0	829.9	811.6	18.36	45.201	
4,400.0	4,369.8	4,310.2	4,271.0	11.7	12.1	141.25	-520.0	-172.3	851.1	832.3	18.81	45.249	
4,500.0	4,469.1	4,407.9	4,367.7	11.9	12.4	141.15	-534.2	-175.7	872.2	853.0	19.26	45.294	
4,600.0	4,568.3	4,505.6	4,464.3	12.2	12.7	141.05	-548.3	-179.0	893.4	873.7	19.71	45.337	
4,700.0	4,667.5	4,603.4	4,561.0	12.5	13.0	140.95	-562.4	-182.3	914.5	894.4	20.15	45.378	
4,800.0	4,766.8	4,701.1	4,657.6	12.8	13.3	140.86	-576.6	-185.6	935.7	915.1	20.60	45.418	
4,900.0	4,866.0	4,798.8	4,754.2	13.0	13.6	140.77	-590.7	-189.0	956.9	935.8	21.05	45.456	
5,000.0	4,965.3	4,896.5	4,850.9	13.3	13.9	140.69	-604.9	-192.3	978.0	956.5	21.50	45.493	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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
5,100.0	5,064.5	4,994.3	4,947.5	13.6	14.2	140.61	-619.0	-195.6	999.2	977.3	21.95	45.528	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-17H-P267 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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	-89.49	0.4	-40.0	40.0				
100.0	100.0	100.0	100.0	0.1	0.1	-89.49	0.4	-40.0	40.0	39.7	0.24	163.641	
200.0	200.0	200.0	200.0	0.3	0.3	-89.49	0.4	-40.0	40.0	39.4	0.59	67.382	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-179.71	0.4	-40.0	41.7	40.8	0.94	44.295	
400.0	399.8	399.8	399.8	0.7	0.6	-179.74	0.4	-40.0	47.0	45.7	1.29	36.417	
500.0	499.5	499.4	499.4	0.9	0.8	179.78	-0.1	-40.0	55.7	54.0	1.64	34.047	
553.7	552.8	552.8	552.7	1.0	0.9	178.48	-1.5	-40.0	61.8	60.0	1.82	33.914	
600.0	598.7	598.6	598.5	1.2	1.0	176.89	-3.5	-40.0	67.6	65.6	1.99	34.033	
700.0	698.0	697.4	697.1	1.4	1.2	172.47	-10.3	-40.1	80.5	78.2	2.36	34.148	
800.0	797.2	795.5	794.7	1.7	1.4	167.27	-20.5	-40.1	94.5	91.8	2.76	34.194	
900.0	896.5	893.4	891.7	2.0	1.7	161.93	-33.5	-40.3	110.0	106.8	3.20	34.346	
1,000.0	995.7	991.7	989.0	2.2	1.9	157.71	-47.1	-40.4	126.3	122.7	3.66	34.551	
1,100.0	1,094.9	1,090.0	1,086.4	2.5	2.2	154.46	-60.7	-40.5	143.2	139.1	4.12	34.775	
1,200.0	1,194.2	1,188.3	1,183.7	2.8	2.5	151.90	-74.3	-40.6	160.4	155.8	4.58	35.002	
1,300.0	1,293.4	1,286.5	1,281.1	3.1	2.7	149.84	-87.8	-40.7	177.9	172.8	5.05	35.221	
1,400.0	1,392.7	1,384.8	1,378.4	3.3	3.0	148.14	-101.4	-40.8	195.5	190.0	5.52	35.429	
1,500.0	1,491.9	1,483.1	1,475.7	3.6	3.3	146.73	-115.0	-40.9	213.3	207.3	5.99	35.623	
1,600.0	1,591.1	1,581.4	1,573.1	3.9	3.6	145.54	-128.6	-41.0	231.2	224.7	6.46	35.804	
1,700.0	1,690.4	1,679.7	1,670.4	4.2	3.9	144.51	-142.1	-41.1	249.2	242.2	6.93	35.971	
1,800.0	1,789.6	1,777.9	1,767.7	4.4	4.2	143.63	-155.7	-41.2	267.2	259.8	7.40	36.126	
1,900.0	1,888.9	1,876.2	1,865.1	4.7	4.4	142.85	-169.3	-41.3	285.3	277.4	7.87	36.270	
2,000.0	1,988.1	1,974.5	1,962.4	5.0	4.7	142.17	-182.9	-41.4	303.5	295.1	8.34	36.402	
2,100.0	2,087.3	2,072.8	2,059.8	5.3	5.0	141.57	-196.4	-41.5	321.6	312.8	8.81	36.525	
2,200.0	2,186.6	2,171.1	2,157.1	5.5	5.3	141.03	-210.0	-41.6	339.9	330.6	9.28	36.639	
2,300.0	2,285.8	2,269.3	2,254.4	5.8	5.6	140.54	-223.6	-41.8	358.1	348.3	9.75	36.745	
2,400.0	2,385.0	2,367.6	2,351.8	6.1	5.9	140.10	-237.2	-41.9	376.3	366.1	10.21	36.843	
2,500.0	2,484.3	2,465.9	2,449.1	6.4	6.2	139.71	-250.8	-42.0	394.6	383.9	10.68	36.935	
2,600.0	2,583.5	2,564.2	2,546.4	6.7	6.5	139.34	-264.3	-42.1	412.9	401.8	11.15	37.021	
2,700.0	2,682.8	2,662.5	2,643.8	6.9	6.8	139.01	-277.9	-42.2	431.2	419.6	11.62	37.102	
2,800.0	2,782.0	2,760.7	2,741.1	7.2	7.1	138.71	-291.5	-42.3	449.6	437.5	12.09	37.177	
2,900.0	2,881.2	2,859.0	2,838.5	7.5	7.3	138.43	-305.1	-42.4	467.9	455.3	12.56	37.248	
3,000.0	2,980.5	2,957.3	2,935.8	7.8	7.6	138.17	-318.6	-42.5	486.2	473.2	13.03	37.315	
3,100.0	3,079.7	3,055.6	3,033.1	8.0	7.9	137.93	-332.2	-42.6	504.6	491.1	13.50	37.378	
3,200.0	3,179.0	3,153.9	3,130.5	8.3	8.2	137.70	-345.8	-42.7	523.0	509.0	13.97	37.437	
3,300.0	3,278.2	3,252.1	3,227.8	8.6	8.5	137.50	-359.4	-42.8	541.3	526.9	14.44	37.493	
3,400.0	3,377.4	3,350.4	3,325.1	8.9	8.8	137.30	-372.9	-42.9	559.7	544.8	14.91	37.546	
3,500.0	3,476.7	3,448.7	3,422.5	9.2	9.1	137.12	-386.5	-43.0	578.1	562.7	15.38	37.596	
3,600.0	3,575.9	3,547.0	3,519.8	9.4	9.4	136.95	-400.1	-43.1	596.5	580.6	15.84	37.644	
3,700.0	3,675.2	3,645.3	3,617.2	9.7	9.7	136.79	-413.7	-43.3	614.9	598.5	16.31	37.689	
3,800.0	3,774.4	3,743.5	3,714.5	10.0	10.0	136.63	-427.3	-43.4	633.3	616.5	16.78	37.733	
3,900.0	3,873.6	3,841.8	3,811.8	10.3	10.3	136.49	-440.8	-43.5	651.7	634.4	17.25	37.774	
4,000.0	3,972.9	3,940.1	3,909.2	10.5	10.5	136.36	-454.4	-43.6	670.1	652.3	17.72	37.813	
4,100.0	4,072.1	4,038.4	4,006.5	10.8	10.8	136.23	-468.0	-43.7	688.5	670.3	18.19	37.850	
4,200.0	4,171.3	4,136.7	4,103.8	11.1	11.1	136.11	-481.6	-43.8	706.9	688.2	18.66	37.886	
4,300.0	4,270.6	4,234.9	4,201.2	11.4	11.4	135.99	-495.1	-43.9	725.3	706.2	19.13	37.920	
4,400.0	4,369.8	4,333.2	4,298.5	11.7	11.7	135.88	-508.7	-44.0	743.7	724.1	19.60	37.953	
4,500.0	4,469.1	4,431.5	4,395.9	11.9	12.0	135.78	-522.3	-44.1	762.1	742.1	20.06	37.984	
4,600.0	4,568.3	4,529.8	4,493.2	12.2	12.3	135.68	-535.9	-44.2	780.5	760.0	20.53	38.014	
4,700.0	4,667.5	4,628.1	4,590.5	12.5	12.6	135.58	-549.4	-44.3	799.0	778.0	21.00	38.043	
4,800.0	4,766.8	4,726.3	4,687.9	12.8	12.9	135.49	-563.0	-44.4	817.4	795.9	21.47	38.071	
4,900.0	4,866.0	4,824.6	4,785.2	13.0	13.2	135.41	-576.6	-44.5	835.8	813.9	21.94	38.097	
5,000.0	4,965.3	4,922.9	4,882.5	13.3	13.5	135.32	-590.2	-44.6	854.3	831.8	22.41	38.123	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-17H-P267 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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
5,100.0	5,064.5	5,021.2	4,979.9	13.6	13.8	135.24	-603.8	-44.8	872.7	849.8	22.88	38.148	
5,200.0	5,163.7	5,119.5	5,077.2	13.9	14.1	135.17	-617.3	-44.9	891.1	867.8	23.35	38.171	
5,300.0	5,263.0	5,217.7	5,174.6	14.2	14.3	135.10	-630.9	-45.0	909.6	885.7	23.81	38.194	
5,400.0	5,362.2	5,316.0	5,271.9	14.4	14.6	135.03	-644.5	-45.1	928.0	903.7	24.28	38.216	
5,500.0	5,461.4	5,414.3	5,369.2	14.7	14.9	134.96	-658.1	-45.2	946.4	921.7	24.75	38.238	
5,600.0	5,560.7	5,512.6	5,466.6	15.0	15.2	134.89	-671.6	-45.3	964.9	939.6	25.22	38.258	
5,700.0	5,659.9	5,610.9	5,563.9	15.3	15.5	134.83	-685.2	-45.4	983.3	957.6	25.69	38.278	
7,050.0	6,999.5	8,191.9	7,498.0	19.0	14.3	-137.60	10.7	-44.6	999.6	973.2	26.48	37.748	
7,100.0	7,048.4	8,200.3	7,498.0	19.2	14.3	-124.51	19.0	-44.5	981.5	954.9	26.58	36.924	
7,150.0	7,096.4	8,212.9	7,498.0	19.3	14.3	-117.64	31.7	-44.4	965.7	939.0	26.70	36.172	
7,200.0	7,143.1	8,229.7	7,498.0	19.4	14.4	-113.40	48.5	-44.2	952.5	925.6	26.82	35.511	
7,250.0	7,188.2	8,250.6	7,498.0	19.6	14.5	-110.32	69.3	-44.0	941.7	914.7	26.97	34.919	
7,300.0	7,231.4	8,275.3	7,498.0	19.8	14.6	-107.75	94.1	-43.7	933.2	906.1	27.16	34.365	
7,350.0	7,272.2	8,303.7	7,498.0	19.9	14.7	-105.40	122.5	-43.4	927.0	899.6	27.42	33.809	
7,400.0	7,310.4	8,335.6	7,498.0	20.1	14.8	-103.17	154.4	-43.0	922.8	895.0	27.82	33.174	
7,450.0	7,345.8	8,370.8	7,498.0	20.3	15.0	-101.00	189.5	-42.7	920.2	891.9	28.31	32.510	
7,500.0	7,377.9	8,408.8	7,498.0	20.6	15.3	-98.91	227.6	-42.3	919.0	890.1	28.89	31.805	
7,536.1	7,399.1	8,438.0	7,498.0	20.7	15.5	-97.47	256.8	-41.9	918.8	889.4	29.41	31.242	
7,550.0	7,406.7	8,449.6	7,498.0	20.8	15.6	-96.93	268.4	-41.8	918.8	889.2	29.61	31.032	
7,600.0	7,431.8	8,492.8	7,498.0	21.1	15.9	-95.11	311.5	-41.4	919.3	888.9	30.38	30.264	
7,650.0	7,453.1	8,537.9	7,498.0	21.4	16.3	-93.50	356.7	-40.9	920.2	888.9	31.23	29.460	
7,700.0	7,470.4	8,584.8	7,498.0	21.8	16.7	-92.14	403.5	-40.4	921.1	889.0	32.12	28.673	
7,750.0	7,483.6	8,633.0	7,498.0	22.1	17.2	-91.10	451.7	-39.9	921.9	888.9	33.07	27.879	
7,800.0	7,492.6	8,682.2	7,498.0	22.5	17.6	-90.38	500.9	-39.3	922.4	888.4	34.04	27.096	
7,850.0	7,497.3	8,731.9	7,498.0	22.9	18.2	-90.03	550.6	-38.8	922.5	887.4	35.06	26.309	
7,879.2	7,498.0	8,761.1	7,498.0	23.2	18.5	-90.00	579.8	-38.5	922.3	886.6	35.68	25.850	
7,900.0	7,498.0	8,781.9	7,498.0	23.4	18.7	-90.00	600.6	-38.3	922.0	885.9	36.16	25.498	
8,000.0	7,498.0	8,881.9	7,498.0	24.3	19.9	-90.00	700.6	-37.2	921.0	882.3	38.61	23.851	
8,100.0	7,498.0	8,981.9	7,498.0	25.4	21.2	-90.00	800.6	-36.1	919.9	878.7	41.22	22.317	
8,200.0	7,498.0	9,081.9	7,498.0	26.5	22.6	-90.00	900.6	-35.1	918.8	874.9	43.95	20.906	
8,300.0	7,498.0	9,181.9	7,498.0	27.6	23.9	-90.00	1,000.6	-34.0	917.8	871.0	46.78	19.617	
8,400.0	7,498.0	9,281.9	7,498.0	28.9	25.4	-90.00	1,100.6	-32.9	916.7	867.0	49.70	18.443	
8,500.0	7,498.0	9,381.9	7,498.0	30.2	26.9	-90.00	1,200.6	-31.9	915.6	862.9	52.70	17.375	
8,600.0	7,498.0	9,481.9	7,498.0	31.5	28.4	-90.00	1,300.5	-30.8	914.6	858.8	55.75	16.405	
8,700.0	7,498.0	9,581.9	7,498.0	32.9	29.9	-90.00	1,400.5	-29.7	913.5	854.6	58.85	15.522	
8,800.0	7,498.0	9,681.8	7,498.0	34.3	31.5	-90.00	1,500.5	-28.7	912.4	850.4	62.00	14.717	
8,900.0	7,498.0	9,781.8	7,498.0	35.7	33.0	-90.00	1,600.5	-27.6	911.3	846.2	65.18	13.982	
9,000.0	7,498.0	9,881.8	7,498.0	37.2	34.6	-90.00	1,700.5	-26.5	910.3	841.9	68.40	13.309	
9,100.0	7,498.0	9,981.8	7,498.0	38.7	36.2	-90.00	1,800.5	-25.5	909.2	837.6	71.64	12.692	
9,200.0	7,498.0	10,081.8	7,498.0	40.2	37.9	-90.00	1,900.5	-24.4	908.1	833.2	74.90	12.124	
9,300.0	7,498.0	10,181.8	7,498.0	41.7	39.5	-90.00	2,000.5	-23.3	907.1	828.9	78.19	11.601	
9,400.0	7,498.0	10,281.8	7,498.0	43.3	41.1	-90.00	2,100.5	-22.3	906.0	824.5	81.50	11.117	
9,500.0	7,498.0	10,381.8	7,498.0	44.8	42.8	-90.00	2,200.4	-21.2	904.9	820.1	84.82	10.669	
9,600.0	7,498.0	10,481.8	7,498.0	46.4	44.4	-90.00	2,300.4	-20.1	903.9	815.7	88.16	10.253	
9,700.0	7,498.0	10,581.8	7,498.0	48.0	46.1	-90.00	2,400.4	-19.1	902.8	811.3	91.50	9.866	
9,800.0	7,498.0	10,681.8	7,498.0	49.6	47.8	-90.00	2,500.4	-18.0	901.7	806.9	94.87	9.505	
9,900.0	7,498.0	10,781.8	7,498.0	51.2	49.5	-90.00	2,600.4	-16.9	900.7	802.4	98.24	9.168	
10,000.0	7,498.0	10,881.8	7,498.0	52.8	51.1	-90.00	2,700.4	-15.9	899.6	798.0	101.62	8.853	
10,100.0	7,498.0	10,981.8	7,498.0	54.4	52.8	-90.00	2,800.4	-14.8	898.5	793.5	105.01	8.557	
10,200.0	7,498.0	11,081.8	7,498.0	56.1	54.5	-90.00	2,900.4	-13.7	897.5	789.1	108.40	8.279	
10,300.0	7,498.0	11,181.8	7,498.0	57.7	56.2	-90.00	3,000.4	-12.6	896.4	784.6	111.80	8.018	
10,400.0	7,498.0	11,281.8	7,498.0	59.4	57.9	-90.00	3,100.3	-11.6	895.3	780.1	115.21	7.771	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-17H-P267 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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
10,500.0	7,498.0	11,381.8	7,498.0	61.0	59.6	-90.00	3,200.3	-10.5	894.3	775.6	118.63	7.538	
10,600.0	7,498.0	11,475.0	7,498.0	62.7	61.2	-90.00	3,293.6	-9.7	893.4	771.5	121.93	7.327	
10,620.8	7,498.0	11,493.0	7,498.0	63.0	61.5	-90.00	3,311.5	-9.7	893.4	770.8	122.60	7.287	
10,700.0	7,498.0	11,561.7	7,498.0	64.3	62.7	-90.00	3,380.2	-10.1	893.8	768.7	125.13	7.143	
10,800.0	7,498.0	11,661.6	7,498.0	66.0	64.4	-90.00	3,480.2	-11.2	895.0	766.4	128.56	6.962	
10,900.0	7,498.0	11,761.6	7,498.0	67.7	66.1	-90.00	3,580.2	-12.4	896.2	764.2	131.99	6.790	
11,000.0	7,498.0	11,861.6	7,498.0	69.4	67.8	-90.00	3,680.2	-13.6	897.4	761.9	135.43	6.626	
11,100.0	7,498.0	11,961.6	7,498.0	71.0	69.5	-90.00	3,780.2	-14.8	898.5	759.7	138.87	6.470	
11,200.0	7,498.0	12,061.6	7,498.0	72.7	71.3	-90.00	3,880.2	-16.0	899.7	757.4	142.31	6.322	
11,300.0	7,498.0	12,161.6	7,498.0	74.4	73.0	-90.00	3,980.1	-17.1	900.9	755.1	145.76	6.181	
11,400.0	7,498.0	12,261.6	7,498.0	76.1	74.7	-90.00	4,080.1	-18.3	902.1	752.9	149.21	6.046	
11,500.0	7,498.0	12,361.6	7,498.0	77.8	76.4	-90.00	4,180.1	-19.5	903.3	750.6	152.66	5.917	
11,600.0	7,498.0	12,461.6	7,498.0	79.5	78.2	-90.00	4,280.1	-20.7	904.5	748.3	156.12	5.793	
11,700.0	7,498.0	12,561.6	7,498.0	81.2	79.9	-90.00	4,380.1	-21.9	905.6	746.1	159.58	5.675	
11,800.0	7,498.0	12,661.6	7,498.0	82.9	81.6	-90.00	4,480.1	-23.1	906.8	743.8	163.04	5.562	
11,900.0	7,498.0	12,761.6	7,498.0	84.6	83.3	-90.00	4,580.1	-24.2	908.0	741.5	166.50	5.454	
12,000.0	7,498.0	12,861.6	7,498.0	86.3	85.1	-90.00	4,680.0	-25.4	909.2	739.2	169.96	5.349	
12,100.0	7,498.0	12,961.6	7,498.0	88.0	86.8	-90.00	4,780.0	-26.6	910.4	736.9	173.43	5.249	
12,200.0	7,498.0	13,061.5	7,498.0	89.7	88.5	-90.00	4,880.0	-27.8	911.5	734.6	176.89	5.153	
12,300.0	7,498.0	13,161.5	7,498.0	91.4	90.3	-90.00	4,980.0	-29.0	912.7	732.4	180.36	5.061	
12,400.0	7,498.0	13,261.5	7,498.0	93.1	92.0	-90.00	5,080.0	-30.1	913.9	730.1	183.83	4.971	
12,500.0	7,498.0	13,361.5	7,498.0	94.9	93.7	-90.00	5,180.0	-31.3	915.1	727.8	187.30	4.886	
12,600.0	7,498.0	13,461.5	7,498.0	96.6	95.5	-90.00	5,280.0	-32.5	916.3	725.5	190.77	4.803	
12,700.0	7,498.0	13,561.5	7,498.0	98.3	97.2	-90.00	5,380.0	-33.7	917.4	723.2	194.25	4.723	
12,800.0	7,498.0	13,661.5	7,498.0	100.0	98.9	-90.00	5,479.9	-34.9	918.6	720.9	197.72	4.646	
12,909.2	7,498.0	13,770.7	7,498.0	101.9	100.8	-90.00	5,589.1	-36.1	919.9	718.4	201.52	4.565	
13,000.0	7,498.0	13,861.5	7,498.0	103.4	102.4	-90.00	5,679.9	-37.2	920.3	715.9	204.41	4.502	
13,100.0	7,498.0	13,961.5	7,498.0	105.2	104.1	-90.00	5,779.9	-38.4	919.0	711.4	207.54	4.428	
13,113.0	7,498.0	13,974.5	7,498.0	105.4	104.4	-90.00	5,792.9	-38.6	918.7	710.8	207.94	4.418	
13,200.0	7,498.0	14,061.5	7,498.0	106.9	105.9	-90.00	5,879.9	-39.6	916.6	705.7	210.97	4.345	
13,300.0	7,498.0	14,161.4	7,498.0	108.6	107.6	-90.00	5,979.8	-40.8	914.3	699.8	214.45	4.263	
13,400.0	7,498.0	14,261.4	7,498.0	110.3	109.4	-90.00	6,079.8	-41.9	911.9	693.9	217.93	4.184	
13,500.0	7,498.0	14,361.4	7,498.0	112.0	111.1	-90.00	6,179.8	-43.1	909.5	688.1	221.41	4.108	
13,600.0	7,498.0	14,461.3	7,498.0	113.7	112.8	-90.00	6,279.7	-44.3	907.1	682.2	224.89	4.034	
13,700.0	7,498.0	14,561.3	7,498.0	115.5	114.6	-90.00	6,379.7	-45.5	904.7	676.4	228.38	3.962	
13,800.0	7,498.0	14,661.3	7,498.0	117.2	116.3	-90.00	6,479.7	-46.7	902.4	670.5	231.86	3.892	
13,855.2	7,498.0	14,716.4	7,498.0	118.1	117.3	-90.00	6,534.8	-47.3	901.1	667.3	233.78	3.854	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4l-17H-P267 - DD - Plan #4

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.33	0.3	-29.9	29.9				
100.0	100.0	100.0	100.0	0.1	0.1	-89.33	0.3	-29.9	29.9	29.7	0.24	122.448	
200.0	200.0	200.0	200.0	0.3	0.3	-89.33	0.3	-29.9	29.9	29.3	0.59	50.420	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-179.57	0.3	-29.9	31.7	30.7	0.94	33.611	
400.0	399.8	399.8	399.8	0.7	0.6	-179.63	0.3	-29.9	36.9	35.6	1.29	28.612	
500.0	499.5	499.5	499.5	0.9	0.8	179.21	-0.5	-29.9	45.6	44.0	1.64	27.875	
553.7	552.8	552.8	552.8	1.0	0.9	177.99	-1.7	-29.9	51.7	49.9	1.82	28.376	
600.0	598.7	598.7	598.7	1.2	1.0	176.78	-3.1	-29.9	57.4	55.5	1.99	28.935	
700.0	698.0	697.8	697.7	1.4	1.2	173.80	-7.4	-29.8	70.0	67.6	2.34	29.847	
800.0	797.2	796.7	796.4	1.7	1.4	170.55	-13.4	-29.7	82.9	80.2	2.72	30.500	
900.0	896.5	895.4	894.8	2.0	1.6	167.18	-21.1	-29.5	96.3	93.2	3.11	30.985	
1,000.0	995.7	993.8	992.8	2.2	1.8	163.78	-30.4	-29.4	110.4	106.9	3.52	31.364	
1,100.0	1,094.9	1,091.9	1,090.2	2.5	2.0	160.43	-41.4	-29.2	125.3	121.3	3.95	31.687	
1,200.0	1,194.2	1,189.6	1,187.1	2.8	2.3	157.15	-54.0	-29.0	141.1	136.7	4.41	31.994	
1,300.0	1,293.4	1,286.8	1,283.2	3.1	2.6	153.99	-68.1	-28.7	158.0	153.2	4.89	32.326	
1,400.0	1,392.7	1,384.8	1,380.1	3.3	2.9	151.16	-83.3	-28.5	175.7	170.4	5.38	32.684	
1,500.0	1,491.9	1,482.9	1,477.0	3.6	3.1	148.85	-98.5	-28.2	193.8	187.9	5.87	33.034	
1,600.0	1,591.1	1,581.0	1,573.9	3.9	3.4	146.93	-113.6	-27.9	212.1	205.7	6.36	33.367	
1,700.0	1,690.4	1,679.1	1,670.8	4.2	3.7	145.32	-128.8	-27.7	230.6	223.7	6.85	33.682	
1,800.0	1,789.6	1,777.2	1,767.7	4.4	4.0	143.95	-144.0	-27.4	249.2	241.9	7.33	33.978	
1,900.0	1,888.9	1,879.0	1,868.3	4.7	4.4	142.66	-159.6	-26.4	267.4	259.6	7.84	34.100	
2,000.0	1,988.1	1,981.8	1,969.9	5.0	4.7	141.35	-175.1	-23.7	284.1	275.8	8.36	33.981	
2,100.0	2,087.3	2,085.0	2,072.0	5.3	5.0	140.03	-190.2	-19.1	299.4	290.5	8.89	33.667	
2,200.0	2,186.6	2,184.2	2,169.9	5.5	5.3	138.78	-204.6	-13.7	313.9	304.5	9.42	33.336	
2,300.0	2,285.8	2,282.9	2,267.4	5.8	5.6	137.65	-218.9	-8.2	328.6	318.6	9.94	33.054	
2,400.0	2,385.0	2,381.6	2,365.0	6.1	5.9	136.61	-233.2	-2.8	343.3	332.9	10.46	32.810	
2,500.0	2,484.3	2,480.4	2,462.5	6.4	6.2	135.66	-247.6	2.6	358.2	347.2	10.99	32.597	
2,600.0	2,583.5	2,579.1	2,560.0	6.7	6.5	134.79	-261.9	8.1	373.1	361.6	11.51	32.410	
2,700.0	2,682.8	2,677.8	2,657.6	6.9	6.8	133.98	-276.2	13.5	388.2	376.1	12.04	32.246	
2,800.0	2,782.0	2,776.5	2,755.1	7.2	7.1	133.23	-290.5	18.9	403.3	390.7	12.56	32.101	
2,900.0	2,881.2	2,875.3	2,852.6	7.5	7.4	132.54	-304.8	24.4	418.4	405.3	13.09	31.972	
3,000.0	2,980.5	2,974.0	2,950.1	7.8	7.8	131.89	-319.1	29.8	433.6	420.0	13.61	31.857	
3,100.0	3,079.7	3,072.7	3,047.7	8.0	8.1	131.29	-333.4	35.2	448.9	434.8	14.14	31.755	
3,200.0	3,179.0	3,171.4	3,145.2	8.3	8.4	130.73	-347.8	40.6	464.2	449.5	14.66	31.664	
3,300.0	3,278.2	3,270.1	3,242.7	8.6	8.7	130.21	-362.1	46.1	479.6	464.4	15.18	31.581	
3,400.0	3,377.4	3,368.9	3,340.3	8.9	9.0	129.71	-376.4	51.5	494.9	479.2	15.71	31.507	
3,500.0	3,476.7	3,467.6	3,437.8	9.2	9.3	129.25	-390.7	56.9	510.4	494.1	16.23	31.440	
3,600.0	3,575.9	3,566.3	3,535.3	9.4	9.6	128.81	-405.0	62.4	525.8	509.1	16.76	31.379	
3,700.0	3,675.2	3,665.0	3,632.8	9.7	9.9	128.40	-419.3	67.8	541.3	524.0	17.28	31.324	
3,800.0	3,774.4	3,763.8	3,730.4	10.0	10.3	128.01	-433.6	73.2	556.8	539.0	17.80	31.274	
3,900.0	3,873.6	3,862.5	3,827.9	10.3	10.6	127.65	-447.9	78.6	572.3	554.0	18.33	31.228	
4,000.0	3,972.9	3,961.2	3,925.4	10.5	10.9	127.30	-462.3	84.1	587.9	569.0	18.85	31.186	
4,100.0	4,072.1	4,059.9	4,022.9	10.8	11.2	126.97	-476.6	89.5	603.4	584.1	19.37	31.147	
4,200.0	4,171.3	4,158.6	4,120.5	11.1	11.5	126.66	-490.9	94.9	619.0	599.1	19.90	31.112	
4,300.0	4,270.6	4,257.4	4,218.0	11.4	11.8	126.36	-505.2	100.4	634.6	614.2	20.42	31.080	
4,400.0	4,369.8	4,356.1	4,315.5	11.7	12.1	126.07	-519.5	105.8	650.3	629.3	20.94	31.050	
4,500.0	4,469.1	4,454.8	4,413.1	11.9	12.5	125.80	-533.8	111.2	665.9	644.4	21.47	31.022	
4,600.0	4,568.3	4,553.5	4,510.6	12.2	12.8	125.54	-548.1	116.6	681.6	659.6	21.99	30.997	
4,700.0	4,667.5	4,652.3	4,608.1	12.5	13.1	125.30	-562.5	122.1	697.2	674.7	22.51	30.973	
4,800.0	4,766.8	4,751.0	4,705.6	12.8	13.4	125.06	-576.8	127.5	712.9	689.9	23.03	30.952	
4,900.0	4,866.0	4,849.7	4,803.2	13.0	13.7	124.84	-591.1	132.9	728.6	705.0	23.55	30.931	
5,000.0	4,965.3	4,948.4	4,900.7	13.3	14.0	124.62	-605.4	138.4	744.3	720.2	24.08	30.913	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4l-17H-P267 - DD - Plan #4

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,064.5	5,047.1	4,998.2	13.6	14.4	124.41	-619.7	143.8	760.0	735.4	24.60	30.895	
5,200.0	5,163.7	5,145.9	5,095.8	13.9	14.7	124.22	-634.0	149.2	775.7	750.6	25.12	30.879	
5,300.0	5,263.0	5,244.6	5,193.3	14.2	15.0	124.02	-648.3	154.6	791.4	765.8	25.64	30.864	
5,400.0	5,362.2	5,343.3	5,290.8	14.4	15.3	123.84	-662.7	160.1	807.2	781.0	26.16	30.850	
5,500.0	5,461.4	5,442.0	5,388.3	14.7	15.6	123.66	-677.0	165.5	822.9	796.2	26.69	30.837	
5,600.0	5,560.7	5,540.8	5,485.9	15.0	15.9	123.50	-691.3	170.9	838.7	811.5	27.21	30.824	
5,700.0	5,659.9	5,639.5	5,583.4	15.3	16.3	123.33	-705.6	176.4	854.4	826.7	27.73	30.813	
5,800.0	5,759.2	5,738.2	5,680.9	15.5	16.6	123.17	-719.9	181.8	870.2	841.9	28.25	30.802	
5,900.0	5,858.4	5,836.9	5,778.5	15.8	16.9	123.02	-734.2	187.2	885.9	857.2	28.77	30.792	
6,000.0	5,957.6	5,935.6	5,876.0	16.1	17.2	122.88	-748.5	192.6	901.7	872.4	29.29	30.782	
6,100.0	6,056.9	6,034.4	5,973.5	16.4	17.5	122.73	-762.8	198.1	917.5	887.7	29.81	30.773	
6,200.0	6,156.1	6,133.1	6,071.0	16.7	17.8	122.60	-777.2	203.5	933.3	903.0	30.34	30.765	
6,300.0	6,255.4	6,231.8	6,168.6	16.9	18.2	122.46	-791.5	208.9	949.1	918.2	30.86	30.757	
6,400.0	6,354.6	6,330.5	6,266.1	17.2	18.5	122.34	-805.8	214.4	964.9	933.5	31.38	30.750	
6,500.0	6,453.8	7,950.9	7,267.0	17.5	14.8	179.83	-2.7	270.1	946.3	921.2	25.15	37.627	
6,600.0	6,553.1	7,950.9	7,267.0	17.8	14.8	179.82	-2.8	270.1	869.5	844.2	25.33	34.334	
6,700.0	6,652.3	7,950.8	7,267.0	18.0	14.8	179.82	-2.8	270.1	797.9	772.4	25.50	31.289	
6,800.0	6,751.6	7,950.8	7,267.0	18.3	14.8	179.81	-2.9	270.1	732.9	707.2	25.67	28.545	
6,900.0	6,850.8	7,950.8	7,267.0	18.6	14.8	179.81	-2.9	270.1	676.5	650.6	25.85	26.170	
6,979.0	6,929.1	7,950.7	7,267.0	18.8	14.8	179.81	-3.0	270.1	639.5	613.6	25.99	24.610	
7,000.0	6,950.0	7,951.1	7,267.0	18.9	14.8	-164.60	-2.6	270.1	631.0	605.0	26.03	24.244	
7,050.0	6,999.5	7,955.1	7,267.0	19.0	14.8	-137.60	1.4	270.1	613.2	587.1	26.13	23.467	
7,100.0	7,048.4	7,963.4	7,267.0	19.2	14.8	-123.73	9.7	270.1	599.1	572.9	26.23	22.844	
7,150.0	7,096.4	7,976.0	7,267.0	19.3	14.8	-115.80	22.3	270.1	589.0	562.7	26.32	22.376	
7,200.0	7,143.1	7,992.7	7,267.0	19.4	14.9	-110.23	39.1	270.1	582.9	556.4	26.45	22.039	
7,250.0	7,188.2	8,013.5	7,267.0	19.6	15.0	-105.58	59.8	270.1	580.5	553.9	26.67	21.768	
7,258.3	7,195.5	8,017.3	7,267.0	19.6	15.0	-104.85	63.7	270.1	580.5	553.8	26.72	21.724	
7,300.0	7,231.4	8,038.2	7,267.0	19.8	15.0	-101.26	84.5	270.1	581.6	554.6	27.02	21.529	
7,350.0	7,272.2	8,066.6	7,267.0	19.9	15.2	-97.04	112.9	270.1	585.6	558.1	27.48	21.310	
7,400.0	7,310.4	8,098.4	7,267.0	20.1	15.3	-92.88	144.7	270.1	591.9	563.9	28.05	21.104	
7,450.0	7,345.8	8,133.5	7,267.0	20.3	15.5	-88.80	179.8	270.1	599.9	571.2	28.73	20.881	
7,500.0	7,377.9	8,171.5	7,267.0	20.6	15.7	-84.91	217.9	270.1	608.9	579.5	29.41	20.702	
7,550.0	7,406.7	8,212.3	7,267.0	20.8	16.0	-81.31	258.6	270.1	618.3	588.2	30.06	20.569	
7,600.0	7,431.8	8,255.4	7,267.0	21.1	16.3	-78.07	301.7	270.1	627.4	596.8	30.66	20.466	
7,650.0	7,453.1	8,300.5	7,267.0	21.4	16.7	-75.29	346.8	270.1	635.9	604.7	31.16	20.409	
7,700.0	7,470.4	8,347.4	7,267.0	21.8	17.1	-73.01	393.7	270.1	643.2	611.6	31.63	20.337	
7,750.0	7,483.6	8,395.6	7,267.0	22.1	17.5	-71.27	441.9	270.1	649.0	617.0	32.04	20.257	
7,800.0	7,492.6	8,444.7	7,267.0	22.5	18.0	-70.09	491.0	270.1	653.1	620.7	32.48	20.106	
7,850.0	7,497.3	8,494.5	7,267.0	22.9	18.5	-69.47	540.8	270.1	655.3	622.4	32.96	19.883	
7,879.2	7,498.0	8,523.7	7,267.0	23.2	18.8	-69.37	570.0	270.1	655.7	622.4	33.29	19.698	
7,900.0	7,498.0	8,544.5	7,267.0	23.4	19.0	-69.37	590.8	270.1	655.7	621.9	33.75	19.427	
8,000.0	7,498.0	8,644.5	7,267.0	24.3	20.2	-69.37	690.8	270.1	655.7	619.6	36.06	18.180	
8,100.0	7,498.0	8,744.5	7,267.0	25.4	21.4	-69.37	790.8	270.1	655.7	617.1	38.52	17.021	
8,200.0	7,498.0	8,844.5	7,267.0	26.5	22.8	-69.37	890.8	270.1	655.7	614.6	41.09	15.955	
8,300.0	7,498.0	8,944.5	7,267.0	27.6	24.1	-69.37	990.8	270.1	655.7	611.9	43.76	14.983	
8,337.8	7,498.0	8,982.3	7,267.0	28.1	24.6	-69.37	1,028.6	270.1	655.7	610.9	44.79	14.638	
8,400.0	7,498.0	9,039.6	7,267.0	28.9	25.5	-69.38	1,085.9	269.9	655.8	609.4	46.44	14.122	
8,500.0	7,498.0	9,129.9	7,267.0	30.2	26.8	-69.42	1,176.2	268.5	657.3	608.2	49.13	13.380	
8,600.0	7,498.0	9,225.7	7,267.0	31.5	28.2	-69.51	1,271.9	265.7	660.0	608.1	51.96	12.703	
8,700.0	7,498.0	9,325.6	7,267.0	32.9	29.7	-69.60	1,371.8	262.6	662.9	608.0	54.90	12.075	
8,800.0	7,498.0	9,425.6	7,267.0	34.3	31.2	-69.69	1,471.7	259.6	665.8	607.9	57.88	11.502	
8,900.0	7,498.0	9,525.5	7,267.0	35.7	32.7	-69.78	1,571.6	256.5	668.6	607.7	60.90	10.979	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4l-17H-P267 - DD - Plan #4

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,498.0	9,625.5	7,267.0	37.2	34.3	-69.87	1,671.6	253.5	671.5	607.5	63.96	10.499	
9,100.0	7,498.0	9,725.4	7,267.0	38.7	35.9	-69.96	1,771.5	250.4	674.4	607.3	67.04	10.059	
9,200.0	7,498.0	9,825.4	7,267.0	40.2	37.5	-70.05	1,871.4	247.4	677.2	607.1	70.15	9.654	
9,300.0	7,498.0	9,925.3	7,267.0	41.7	39.1	-70.14	1,971.3	244.3	680.1	606.8	73.28	9.281	
9,400.0	7,498.0	10,025.3	7,267.0	43.3	40.7	-70.22	2,071.2	241.3	683.0	606.5	76.43	8.936	
9,500.0	7,498.0	10,125.2	7,267.0	44.8	42.4	-70.31	2,171.1	238.2	685.8	606.2	79.60	8.616	
9,600.0	7,498.0	10,225.2	7,267.0	46.4	44.0	-70.39	2,271.0	235.2	688.7	605.9	82.78	8.319	
9,700.0	7,498.0	10,325.1	7,267.0	48.0	45.7	-70.48	2,370.9	232.2	691.6	605.6	85.98	8.043	
9,800.0	7,498.0	10,425.1	7,267.0	49.6	47.3	-70.56	2,470.8	229.1	694.4	605.3	89.20	7.786	
9,900.0	7,498.0	10,525.1	7,267.0	51.2	49.0	-70.65	2,570.7	226.1	697.3	604.9	92.42	7.545	
10,000.0	7,498.0	10,625.0	7,267.0	52.8	50.7	-70.73	2,670.6	223.0	700.2	604.5	95.66	7.320	
10,100.0	7,498.0	10,725.0	7,267.0	54.4	52.3	-70.81	2,770.5	220.0	703.1	604.2	98.91	7.108	
10,200.0	7,498.0	10,824.9	7,267.0	56.1	54.0	-70.89	2,870.4	216.9	706.0	603.8	102.16	6.910	
10,300.0	7,498.0	10,924.9	7,267.0	57.7	55.7	-70.97	2,970.3	213.9	708.8	603.4	105.43	6.723	
10,400.0	7,498.0	11,024.8	7,267.0	59.4	57.4	-71.05	3,070.3	210.8	711.7	603.0	108.71	6.547	
10,500.0	7,498.0	11,124.8	7,267.0	61.0	59.1	-71.13	3,170.2	207.8	714.6	602.6	111.99	6.381	
10,600.0	7,498.0	11,224.7	7,267.0	62.7	60.8	-71.21	3,270.1	204.7	717.5	602.2	115.28	6.224	
10,700.0	7,498.0	11,324.7	7,267.0	64.3	62.5	-71.29	3,370.0	201.7	720.4	601.8	118.58	6.075	
10,800.0	7,498.0	11,424.6	7,267.0	66.0	64.2	-71.37	3,469.9	198.6	723.3	601.4	121.88	5.934	
10,900.0	7,498.0	11,524.6	7,267.0	67.7	65.9	-71.44	3,569.8	195.6	726.2	601.0	125.19	5.801	
11,000.0	7,498.0	11,624.5	7,267.0	69.4	67.6	-71.52	3,669.7	192.5	729.1	600.6	128.50	5.673	
11,100.0	7,498.0	11,724.5	7,267.0	71.0	69.3	-71.60	3,769.6	189.5	732.0	600.1	131.83	5.552	
11,200.0	7,498.0	11,824.4	7,267.0	72.7	71.0	-71.67	3,869.5	186.4	734.9	599.7	135.15	5.437	
11,300.0	7,498.0	11,924.4	7,267.0	74.4	72.8	-71.75	3,969.4	183.4	737.7	599.3	138.48	5.327	
11,400.0	7,498.0	12,024.4	7,267.0	76.1	74.5	-71.82	4,069.3	180.3	740.6	598.8	141.82	5.222	
11,500.0	7,498.0	12,124.3	7,267.0	77.8	76.2	-71.89	4,169.2	177.3	743.5	598.4	145.16	5.122	
11,600.0	7,498.0	12,224.3	7,267.0	79.5	77.9	-71.97	4,269.1	174.2	746.4	597.9	148.50	5.026	
11,700.0	7,498.0	12,324.2	7,267.0	81.2	79.6	-72.04	4,369.0	171.2	749.3	597.5	151.85	4.935	
11,800.0	7,498.0	12,424.2	7,267.0	82.9	81.4	-72.11	4,468.9	168.1	752.2	597.0	155.21	4.847	
11,900.0	7,498.0	12,524.1	7,267.0	84.6	83.1	-72.18	4,568.9	165.1	755.2	596.6	158.56	4.762	
12,000.0	7,498.0	12,624.1	7,267.0	86.3	84.8	-72.25	4,668.8	162.0	758.1	596.1	161.92	4.682	
12,100.0	7,498.0	12,724.0	7,267.0	88.0	86.5	-72.32	4,768.7	159.0	761.0	595.7	165.29	4.604	
12,200.0	7,498.0	12,824.0	7,267.0	89.7	88.3	-72.39	4,868.6	155.9	763.9	595.2	168.65	4.529	
12,300.0	7,498.0	12,923.9	7,267.0	91.4	90.0	-72.46	4,968.5	152.9	766.8	594.7	172.02	4.457	
12,400.0	7,498.0	13,023.9	7,267.0	93.1	91.7	-72.53	5,068.4	149.8	769.7	594.3	175.40	4.388	
12,500.0	7,498.0	13,123.8	7,267.0	94.9	93.5	-72.60	5,168.3	146.8	772.6	593.8	178.78	4.322	
12,600.0	7,498.0	13,223.8	7,267.0	96.6	95.2	-72.66	5,268.2	143.7	775.5	593.3	182.16	4.257	
12,700.0	7,498.0	13,335.0	7,267.0	98.3	97.1	-72.72	5,379.4	141.0	777.9	592.2	185.72	4.188	
12,800.0	7,498.0	13,449.9	7,267.0	100.0	99.1	-72.74	5,494.3	140.4	778.4	589.1	189.30	4.112	
12,909.2	7,498.0	13,575.4	7,267.0	101.9	101.3	-72.69	5,619.7	142.4	776.8	583.6	193.16	4.021	
13,000.0	7,498.0	13,676.6	7,267.0	103.4	103.1	-72.59	5,720.8	145.9	773.0	577.1	195.93	3.945	
13,100.0	7,498.0	13,776.3	7,267.0	105.2	104.8	-72.42	5,820.5	150.0	766.8	568.1	198.68	3.859	
13,113.0	7,498.0	13,789.3	7,267.0	105.4	105.0	-72.40	5,833.5	150.5	765.9	566.8	199.03	3.848	
13,200.0	7,498.0	13,876.0	7,267.0	106.9	106.5	-72.25	5,920.2	154.0	759.5	557.8	201.75	3.765	
13,300.0	7,498.0	13,975.8	7,267.0	108.6	108.3	-72.07	6,019.8	158.1	752.3	547.4	204.86	3.672	
13,400.0	7,498.0	14,075.5	7,267.0	110.3	110.0	-71.89	6,119.4	162.2	745.0	537.1	207.96	3.582	
13,500.0	7,498.0	14,175.2	7,267.0	112.0	111.7	-71.70	6,219.0	166.2	737.8	526.7	211.05	3.496	
13,600.0	7,498.0	14,274.9	7,267.0	113.7	113.5	-71.52	6,318.7	170.3	730.5	516.4	214.13	3.412	
13,700.0	7,498.0	14,374.6	7,267.0	115.5	115.2	-71.32	6,418.3	174.3	723.3	506.1	217.20	3.330	
13,800.0	7,498.0	14,474.3	7,267.0	117.2	116.9	-71.13	6,517.9	178.4	716.1	495.8	220.25	3.251	
13,855.2	7,498.0	14,506.9	7,267.0	118.1	117.5	-71.06	6,550.5	179.7	712.5	490.8	221.61	3.215 SF	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4J-17H-P267 - DD - Plan #3

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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	-88.98	0.4	-19.9	19.9				
100.0	100.0	100.0	100.0	0.1	0.1	-88.98	0.4	-19.9	19.9	19.6	0.24	81.258	
200.0	200.0	200.0	200.0	0.3	0.3	-88.98	0.4	-19.9	19.9	19.3	0.59	33.459	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-179.26	0.4	-19.9	21.6	20.7	0.94	22.927	
400.0	399.8	400.3	400.3	0.7	0.6	-179.40	0.3	-19.4	26.4	25.1	1.29	20.454	
500.0	499.5	501.2	501.1	0.9	0.8	-179.52	0.3	-15.9	31.6	30.0	1.64	19.286	
553.7	552.8	555.0	554.8	1.0	0.9	-179.59	0.3	-12.8	34.7	32.8	1.82	18.995	
600.0	598.7	601.2	600.9	1.2	1.0	-179.64	0.3	-10.1	37.7	35.7	1.99	18.976	
700.0	698.0	701.0	700.5	1.4	1.2	-179.72	0.2	-4.3	44.2	41.9	2.34	18.945	
800.0	797.2	800.7	800.2	1.7	1.4	-179.79	0.2	1.4	50.8	48.1	2.68	18.922	
900.0	896.5	900.5	899.8	2.0	1.6	-179.83	0.1	7.2	57.3	54.3	3.03	18.905	
1,000.0	995.7	1,000.3	999.4	2.2	1.8	-179.87	0.1	13.0	63.9	60.5	3.38	18.891	
1,100.0	1,094.9	1,100.1	1,099.0	2.5	2.0	-179.91	0.0	18.8	70.5	66.7	3.73	18.881	
1,200.0	1,194.2	1,199.9	1,198.6	2.8	2.2	-179.93	0.0	24.5	77.0	72.9	4.08	18.872	
1,300.0	1,293.4	1,299.7	1,298.3	3.1	2.4	-179.95	0.0	30.3	83.6	79.1	4.43	18.865	
1,400.0	1,392.7	1,399.4	1,397.9	3.3	2.6	-179.97	-0.1	36.1	90.1	85.3	4.78	18.858	
1,500.0	1,491.9	1,499.2	1,497.5	3.6	2.8	-179.99	-0.1	41.9	96.7	91.5	5.13	18.853	
1,600.0	1,591.1	1,599.0	1,597.1	3.9	3.0	180.00	-0.2	47.6	103.2	97.7	5.48	18.848	
1,700.0	1,690.4	1,698.8	1,696.7	4.2	3.2	179.98	-0.2	53.4	109.8	103.9	5.82	18.844	
1,800.0	1,789.6	1,798.6	1,796.3	4.4	3.4	179.97	-0.3	59.2	116.3	110.1	6.17	18.841	
1,900.0	1,888.9	1,898.4	1,896.0	4.7	3.6	179.96	-0.3	64.9	122.9	116.3	6.52	18.837	
2,000.0	1,988.1	1,998.2	1,995.6	5.0	3.8	179.95	-0.4	70.7	129.4	122.5	6.87	18.835	
2,100.0	2,087.3	2,097.9	2,095.2	5.3	4.0	179.95	-0.4	76.5	136.0	128.8	7.22	18.832	
2,200.0	2,186.6	2,197.7	2,194.8	5.5	4.2	179.94	-0.5	82.3	142.5	135.0	7.57	18.830	
2,300.0	2,285.8	2,297.5	2,294.4	5.8	4.4	179.93	-0.5	88.0	149.1	141.2	7.92	18.827	
2,400.0	2,385.0	2,397.3	2,394.1	6.1	4.6	179.93	-0.5	93.8	155.6	147.4	8.27	18.826	
2,500.0	2,484.3	2,497.1	2,493.7	6.4	4.8	179.92	-0.6	99.6	162.2	153.6	8.62	18.824	
2,600.0	2,583.5	2,596.9	2,593.3	6.7	5.0	179.92	-0.6	105.4	168.7	159.8	8.96	18.822	
2,700.0	2,682.8	2,696.7	2,692.9	6.9	5.2	179.91	-0.7	111.1	175.3	166.0	9.31	18.821	
2,800.0	2,782.0	2,796.4	2,792.5	7.2	5.4	179.91	-0.7	116.9	181.8	172.2	9.66	18.819	
2,900.0	2,881.2	2,896.2	2,892.1	7.5	5.6	179.90	-0.8	122.7	188.4	178.4	10.01	18.818	
3,000.0	2,980.5	2,996.0	2,991.8	7.8	5.8	179.90	-0.8	128.5	194.9	184.6	10.36	18.817	
3,100.0	3,079.7	3,095.8	3,091.4	8.0	6.0	179.89	-0.9	134.2	201.5	190.8	10.71	18.816	
3,200.0	3,179.0	3,195.6	3,191.0	8.3	6.2	179.89	-0.9	140.0	208.0	197.0	11.06	18.814	
3,300.0	3,278.2	3,295.4	3,290.6	8.6	6.4	179.89	-1.0	145.8	214.6	203.2	11.41	18.813	
3,400.0	3,377.4	3,395.1	3,390.2	8.9	6.6	179.88	-1.0	151.6	221.2	209.4	11.76	18.813	
3,500.0	3,476.7	3,494.9	3,489.8	9.2	6.8	179.88	-1.0	157.3	227.7	215.6	12.10	18.812	
3,600.0	3,575.9	3,594.7	3,589.5	9.4	7.0	179.88	-1.1	163.1	234.3	221.8	12.45	18.811	
3,700.0	3,675.2	3,694.5	3,689.1	9.7	7.2	179.88	-1.1	168.9	240.8	228.0	12.80	18.810	
3,800.0	3,774.4	3,794.3	3,788.7	10.0	7.4	179.87	-1.2	174.7	247.4	234.2	13.15	18.809	
3,900.0	3,873.6	3,894.1	3,888.3	10.3	7.6	179.87	-1.2	180.4	253.9	240.4	13.50	18.809	
4,000.0	3,972.9	3,993.9	3,987.9	10.5	7.8	179.87	-1.3	186.2	260.5	246.6	13.85	18.808	
4,100.0	4,072.1	4,093.6	4,087.6	10.8	8.0	179.87	-1.3	192.0	267.0	252.8	14.20	18.807	
4,200.0	4,171.3	4,193.4	4,187.2	11.1	8.2	179.87	-1.4	197.8	273.6	259.0	14.55	18.807	
4,300.0	4,270.6	4,293.2	4,286.8	11.4	8.4	179.86	-1.4	203.5	280.1	265.2	14.90	18.806	
4,400.0	4,369.8	4,393.0	4,386.4	11.7	8.6	179.86	-1.4	209.3	286.7	271.4	15.24	18.806	
4,500.0	4,469.1	4,492.8	4,486.0	11.9	8.8	179.86	-1.5	215.1	293.2	277.6	15.59	18.805	
4,600.0	4,568.3	4,592.6	4,585.6	12.2	9.0	179.86	-1.5	220.9	299.8	283.8	15.94	18.805	
4,700.0	4,667.5	4,692.4	4,685.3	12.5	9.2	179.86	-1.6	226.6	306.3	290.0	16.29	18.804	
4,800.0	4,766.8	4,792.1	4,784.9	12.8	9.4	179.86	-1.6	232.4	312.9	296.2	16.64	18.804	
4,900.0	4,866.0	4,891.9	4,884.5	13.0	9.6	179.85	-1.7	238.2	319.4	302.4	16.99	18.803	
5,000.0	4,965.3	4,991.7	4,984.1	13.3	9.8	179.85	-1.7	243.9	326.0	308.6	17.34	18.803	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4J-17H-P267 - DD - Plan #3

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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
5,100.0	5,064.5	5,091.5	5,083.7	13.6	10.0	179.85	-1.8	249.7	332.5	314.9	17.69	18.802	
5,200.0	5,163.7	5,191.3	5,183.4	13.9	10.2	179.85	-1.8	255.5	339.1	321.1	18.03	18.802	
5,300.0	5,263.0	5,291.1	5,283.0	14.2	10.4	179.85	-1.9	261.3	345.6	327.3	18.38	18.802	
5,400.0	5,362.2	5,390.9	5,382.6	14.4	10.6	179.85	-1.9	267.0	352.2	333.5	18.73	18.801	
5,500.0	5,461.4	5,490.6	5,482.2	14.7	10.8	179.85	-1.9	272.8	358.7	339.7	19.08	18.801	
5,600.0	5,560.7	5,590.4	5,581.8	15.0	11.0	179.85	-2.0	278.6	365.3	345.9	19.43	18.801	
5,700.0	5,659.9	5,690.2	5,681.4	15.3	11.2	179.84	-2.0	284.4	371.9	352.1	19.78	18.800	
5,800.0	5,759.2	5,790.0	5,781.1	15.5	11.4	179.84	-2.1	290.1	378.4	358.3	20.13	18.800	
5,900.0	5,858.4	5,889.8	5,880.7	15.8	11.6	179.84	-2.1	295.9	385.0	364.5	20.48	18.800	
6,000.0	5,957.6	5,989.6	5,980.3	16.1	11.8	179.84	-2.2	301.7	391.5	370.7	20.83	18.799	
6,100.0	6,056.9	6,089.3	6,079.9	16.4	12.0	179.84	-2.2	307.5	398.1	376.9	21.17	18.799	
6,200.0	6,156.1	6,189.1	6,179.5	16.7	12.2	179.84	-2.3	313.2	404.6	383.1	21.52	18.799	
6,300.0	6,255.4	6,288.9	6,279.2	16.9	12.4	179.84	-2.3	319.0	411.2	389.3	21.87	18.799	
6,400.0	6,354.6	6,388.7	6,378.8	17.2	12.6	179.84	-2.4	324.8	417.7	395.5	22.22	18.798	
6,500.0	6,453.8	6,488.5	6,478.4	17.5	12.8	179.84	-2.4	330.6	424.3	401.7	22.57	18.798	
6,600.0	6,553.1	6,588.3	6,578.0	17.8	13.0	179.84	-2.4	336.3	430.8	407.9	22.92	18.798	
6,700.0	6,652.3	6,688.1	6,677.6	18.0	13.3	179.84	-2.5	342.1	437.4	414.1	23.27	18.798	
6,800.0	6,751.6	6,787.8	6,777.2	18.3	13.5	179.84	-2.5	347.9	443.9	420.3	23.62	18.797	
6,900.0	6,850.8	6,887.6	6,876.9	18.6	13.7	179.83	-2.6	353.7	450.5	426.5	23.97	18.797	
6,979.0	6,929.1	6,966.4	6,955.5	18.8	13.8	179.93	-1.8	358.2	455.7	431.4	24.24	18.797	
7,000.0	6,950.0	6,987.3	6,976.3	18.9	13.9	-163.30	-0.4	359.4	457.0	432.7	24.31	18.797	
7,050.0	6,999.5	7,036.8	7,025.3	19.0	14.0	-134.15	6.1	362.3	460.3	435.8	24.50	18.791	
7,100.0	7,048.4	7,086.1	7,073.3	19.2	14.1	-118.99	16.7	365.0	463.6	438.9	24.70	18.771	
7,150.0	7,096.4	7,135.2	7,120.1	19.3	14.2	-110.62	31.4	367.8	466.8	441.9	24.92	18.730	
7,200.0	7,143.1	7,184.2	7,165.3	19.4	14.3	-105.39	49.9	370.4	469.9	444.8	25.18	18.661	
7,250.0	7,188.2	7,232.9	7,208.6	19.6	14.4	-101.82	72.2	372.9	473.0	447.5	25.49	18.558	
7,300.0	7,231.4	7,281.5	7,249.7	19.8	14.6	-99.19	98.0	375.3	475.9	450.0	25.84	18.417	
7,350.0	7,272.2	7,329.9	7,288.3	19.9	14.7	-97.18	127.0	377.5	478.7	452.4	26.25	18.235	
7,400.0	7,310.4	7,378.2	7,324.3	20.1	14.9	-95.58	159.1	379.6	481.2	454.5	26.72	18.011	
7,450.0	7,345.8	7,426.4	7,357.4	20.3	15.2	-94.29	194.1	381.5	483.6	456.4	27.25	17.746	
7,500.0	7,377.9	7,474.4	7,387.3	20.6	15.4	-93.23	231.6	383.2	485.8	458.0	27.85	17.442	
7,550.0	7,406.7	7,522.4	7,414.0	20.8	15.7	-92.37	271.4	384.8	487.8	459.3	28.52	17.105	
7,600.0	7,431.8	7,570.2	7,437.2	21.1	16.1	-91.66	313.2	386.1	489.5	460.3	29.25	16.738	
7,650.0	7,453.1	7,618.0	7,456.8	21.4	16.4	-91.10	356.8	387.3	491.0	460.9	30.03	16.348	
7,700.0	7,470.4	7,665.7	7,472.7	21.8	16.8	-90.66	401.8	388.2	492.2	461.3	30.88	15.940	
7,750.0	7,483.6	7,713.4	7,484.8	22.1	17.3	-90.34	447.9	388.9	493.1	461.3	31.77	15.520	
7,800.0	7,492.6	7,761.1	7,493.0	22.5	17.8	-90.12	494.8	389.4	493.7	461.0	32.71	15.092	
7,850.0	7,497.3	7,808.7	7,497.3	22.9	18.3	-90.02	542.2	389.6	494.0	460.3	33.69	14.663	
7,879.2	7,498.0	7,836.9	7,498.0	23.2	18.6	-90.00	570.4	389.7	494.0	459.8	34.28	14.411	
7,900.0	7,498.0	7,859.2	7,498.0	23.4	18.8	-90.00	592.7	389.7	494.0	459.2	34.81	14.193	
8,000.0	7,498.0	7,966.7	7,498.0	24.3	20.1	-90.00	700.2	391.1	492.7	455.3	37.42	13.167	
8,100.0	7,498.0	8,066.7	7,498.0	25.4	21.4	-90.00	800.1	393.0	490.8	450.7	40.09	12.241	
8,200.0	7,498.0	8,166.6	7,498.0	26.5	22.7	-90.00	900.1	394.9	488.9	446.0	42.88	11.400	
8,300.0	7,498.0	8,266.6	7,498.0	27.6	24.1	-90.00	1,000.1	396.8	487.0	441.2	45.77	10.639	
8,400.0	7,498.0	8,366.6	7,498.0	28.9	25.5	-90.00	1,100.0	398.7	485.1	436.3	48.74	9.951	
8,500.0	7,498.0	8,466.6	7,498.0	30.2	27.0	-90.00	1,200.0	400.6	483.2	431.4	51.78	9.331	
8,600.0	7,498.0	8,566.6	7,498.0	31.5	28.5	-90.00	1,300.0	402.5	481.3	426.4	54.88	8.770	
8,700.0	7,498.0	8,666.6	7,498.0	32.9	30.0	-90.00	1,399.9	404.4	479.4	421.3	58.02	8.262	
8,800.0	7,498.0	8,766.5	7,498.0	34.3	31.6	-90.00	1,499.9	406.3	477.5	416.3	61.20	7.802	
8,900.0	7,498.0	8,866.5	7,498.0	35.7	33.1	-90.00	1,599.8	408.2	475.5	411.1	64.41	7.383	
9,000.0	7,498.0	8,966.5	7,498.0	37.2	34.7	-90.00	1,699.8	410.1	473.6	406.0	67.66	7.001	
9,100.0	7,498.0	9,066.5	7,498.0	38.7	36.3	-90.00	1,799.8	412.0	471.7	400.8	70.93	6.651	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4J-17H-P267 - DD - Plan #3

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,200.0	7,498.0	9,166.5	7,498.0	40.2	37.9	-90.00	1,899.7	414.0	469.8	395.6	74.22	6.330	
9,300.0	7,498.0	9,266.4	7,498.0	41.7	39.6	-90.00	1,999.7	415.9	467.9	390.4	77.53	6.036	
9,400.0	7,498.0	9,366.4	7,498.0	43.3	41.2	-90.00	2,099.7	417.8	466.0	385.2	80.86	5.764	
9,500.0	7,498.0	9,466.4	7,498.0	44.8	42.9	-90.00	2,199.6	419.7	464.1	379.9	84.20	5.512	
9,600.0	7,498.0	9,566.4	7,498.0	46.4	44.5	-90.00	2,299.6	421.6	462.2	374.7	87.55	5.279	
9,700.0	7,498.0	9,666.4	7,498.0	48.0	46.2	-90.00	2,399.6	423.5	460.3	369.4	90.92	5.063	
9,800.0	7,498.0	9,766.4	7,498.0	49.6	47.9	-90.00	2,499.5	425.4	458.4	364.1	94.29	4.861	
9,900.0	7,498.0	9,866.3	7,498.0	51.2	49.5	-90.00	2,599.5	427.3	456.5	358.8	97.68	4.673	
10,000.0	7,498.0	9,966.3	7,498.0	52.8	51.2	-90.00	2,699.4	429.2	454.6	353.5	101.07	4.498	
10,100.0	7,498.0	10,066.3	7,498.0	54.4	52.9	-90.00	2,799.4	431.1	452.7	348.2	104.48	4.333	
10,200.0	7,498.0	10,166.3	7,498.0	56.1	54.6	-90.00	2,899.4	433.0	450.8	342.9	107.88	4.178	
10,300.0	7,498.0	10,266.3	7,498.0	57.7	56.3	-90.00	2,999.3	434.9	448.9	337.6	111.30	4.033	
10,400.0	7,498.0	10,366.2	7,498.0	59.4	58.0	-90.00	3,099.3	436.8	447.0	332.3	114.72	3.896	
10,500.0	7,498.0	10,466.2	7,498.0	61.0	59.7	-90.00	3,199.3	438.7	445.1	326.9	118.14	3.767	
10,600.0	7,498.0	10,566.2	7,498.0	62.7	61.4	-90.00	3,299.2	440.6	443.2	321.6	121.57	3.645	
10,700.0	7,498.0	10,666.2	7,498.0	64.3	63.1	-90.00	3,399.2	442.5	441.3	316.2	125.01	3.530	
10,800.0	7,498.0	10,766.2	7,498.0	66.0	64.8	-90.00	3,499.2	444.4	439.3	310.9	128.45	3.420	
10,900.0	7,498.0	10,866.2	7,498.0	67.7	66.5	-90.00	3,599.1	446.3	437.4	305.6	131.89	3.317	
11,000.0	7,498.0	10,966.1	7,498.0	69.4	68.2	-90.00	3,699.1	448.2	435.5	300.2	135.33	3.218	
11,100.0	7,498.0	11,066.1	7,498.0	71.0	69.9	-90.00	3,799.0	450.1	433.6	294.9	138.78	3.125	
11,200.0	7,498.0	11,166.1	7,498.0	72.7	71.7	-90.00	3,899.0	452.1	431.7	289.5	142.23	3.035	
11,300.0	7,498.0	11,266.1	7,498.0	74.4	73.4	-90.00	3,999.0	454.0	429.8	284.1	145.69	2.950	
11,400.0	7,498.0	11,366.1	7,498.0	76.1	75.1	-90.00	4,098.9	455.9	427.9	278.8	149.14	2.869	
11,500.0	7,498.0	11,466.0	7,498.0	77.8	76.8	-90.00	4,198.9	457.8	426.0	273.4	152.60	2.792	
11,600.0	7,498.0	11,566.0	7,498.0	79.5	78.6	-90.00	4,298.9	459.7	424.1	268.0	156.06	2.718	
11,700.0	7,498.0	11,666.0	7,498.0	81.2	80.3	-90.00	4,398.8	461.6	422.2	262.7	159.53	2.647	
11,800.0	7,498.0	11,766.0	7,498.0	82.9	82.0	-90.00	4,498.8	463.5	420.3	257.3	162.99	2.579	
11,900.0	7,498.0	11,866.0	7,498.0	84.6	83.7	-90.00	4,598.8	465.4	418.4	251.9	166.46	2.513	
12,000.0	7,498.0	11,966.0	7,498.0	86.3	85.5	-90.00	4,698.7	467.3	416.5	246.6	169.93	2.451	
12,100.0	7,498.0	12,065.9	7,498.0	88.0	87.2	-90.00	4,798.7	469.2	414.6	241.2	173.40	2.391	
12,200.0	7,498.0	12,160.8	7,498.0	89.7	88.8	-90.00	4,893.5	470.6	413.1	236.4	176.78	2.337	
12,241.9	7,498.0	12,200.0	7,498.0	90.4	89.5	-90.00	4,932.7	470.7	413.0	234.8	178.19	2.318	
12,300.0	7,498.0	12,254.1	7,498.0	91.4	90.4	-90.00	4,986.8	470.4	413.3	233.2	180.14	2.294	
12,400.0	7,498.0	12,347.3	7,498.0	93.1	92.0	-90.00	5,080.0	468.8	415.1	231.6	183.49	2.262	
12,500.0	7,498.0	12,440.5	7,498.0	94.9	93.7	-90.00	5,173.2	465.6	418.5	231.6	186.85	2.240	
12,600.0	7,498.0	12,534.7	7,498.0	96.6	95.3	-90.00	5,267.3	460.9	423.5	233.2	190.23	2.226	
12,700.0	7,498.0	12,634.6	7,498.0	98.3	97.0	-90.00	5,367.0	455.3	429.0	235.3	193.70	2.215	
12,800.0	7,498.0	12,734.4	7,498.0	100.0	98.7	-90.00	5,466.7	449.8	434.6	237.4	197.18	2.204	
12,909.2	7,498.0	12,843.5	7,498.0	101.9	100.6	-90.00	5,575.6	443.8	440.6	239.6	200.97	2.192	
13,000.0	7,498.0	12,934.2	7,498.0	103.4	102.2	-90.00	5,666.1	438.7	444.9	241.2	203.74	2.184	
13,100.0	7,498.0	13,034.1	7,498.0	105.2	103.9	-90.00	5,765.9	433.2	448.0	241.3	206.74	2.167	
13,113.0	7,498.0	13,047.1	7,498.0	105.4	104.1	-90.00	5,778.8	432.5	448.3	241.2	207.12	2.164	
13,200.0	7,498.0	13,134.1	7,498.0	106.9	105.6	-90.00	5,865.7	427.6	450.0	239.9	210.16	2.141	
13,300.0	7,498.0	13,234.1	7,498.0	108.6	107.4	-90.00	5,965.5	422.1	452.0	238.4	213.64	2.116	
13,400.0	7,498.0	13,334.1	7,498.0	110.3	109.1	-90.00	6,065.4	416.5	454.0	236.9	217.13	2.091	
13,500.0	7,498.0	13,434.0	7,498.0	112.0	110.8	-90.00	6,165.2	411.0	456.0	235.4	220.61	2.067	
13,600.0	7,498.0	13,534.0	7,498.0	113.7	112.5	-90.00	6,265.0	405.4	458.0	233.9	224.10	2.044	
13,700.0	7,498.0	13,634.0	7,498.0	115.5	114.3	-90.00	6,364.8	399.9	460.0	232.4	227.59	2.021	
13,800.0	7,498.0	13,734.0	7,498.0	117.2	116.0	-90.00	6,464.7	394.4	462.0	230.9	231.08	1.999	
13,855.2	7,498.0	13,789.1	7,498.0	118.1	117.0	-90.00	6,519.7	391.3	463.1	230.1	233.00	1.988	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4K-17H-P267 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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	-89.95	0.0	-10.1	10.1				
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	-10.1	10.1	9.8	0.24	41.195	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-10.1	10.1	9.5	0.59	16.963	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	179.86	0.0	-10.1	11.8	10.9	0.94	12.537	
400.0	399.8	400.4	400.4	0.7	0.6	179.91	0.0	-8.3	15.3	14.0	1.29	11.850	
500.0	499.5	500.9	500.8	0.9	0.8	179.97	0.0	-3.0	18.8	17.1	1.64	11.451	
553.7	552.8	555.0	554.6	1.0	1.0	180.00	0.0	1.3	20.6	18.8	1.83	11.296	
600.0	598.7	601.3	600.8	1.2	1.1	-179.98	0.0	5.6	22.1	20.1	1.99	11.097	
700.0	698.0	701.3	700.3	1.4	1.3	-179.93	0.0	14.8	25.1	22.8	2.34	10.743	
800.0	797.2	801.2	799.8	1.7	1.5	-179.89	0.0	24.1	28.2	25.5	2.69	10.482	
900.0	896.5	901.2	899.4	2.0	1.7	-179.86	0.0	33.4	31.2	28.2	3.04	10.281	
1,000.0	995.7	1,001.1	998.9	2.2	2.0	-179.84	-0.1	42.6	34.3	30.9	3.39	10.122	
1,100.0	1,094.9	1,101.1	1,098.4	2.5	2.2	-179.82	-0.1	51.9	37.3	33.6	3.74	9.992	
1,200.0	1,194.2	1,201.0	1,197.9	2.8	2.4	-179.80	-0.1	61.2	40.4	36.3	4.09	9.885	
1,300.0	1,293.4	1,301.0	1,297.5	3.1	2.7	-179.78	-0.1	70.5	43.4	39.0	4.43	9.795	
1,400.0	1,392.7	1,401.0	1,397.0	3.3	2.9	-179.77	-0.1	79.7	46.5	41.7	4.78	9.718	
1,500.0	1,491.9	1,500.9	1,496.5	3.6	3.1	-179.76	-0.1	89.0	49.5	44.4	5.13	9.651	
1,600.0	1,591.1	1,600.9	1,596.0	3.9	3.4	-179.75	-0.1	98.3	52.6	47.1	5.48	9.593	
1,700.0	1,690.4	1,700.8	1,695.5	4.2	3.6	-179.74	-0.1	107.6	55.7	49.8	5.83	9.542	
1,800.0	1,789.6	1,800.8	1,795.1	4.4	3.9	-179.73	-0.1	116.8	58.7	52.5	6.18	9.497	
1,900.0	1,888.9	1,900.7	1,894.6	4.7	4.1	-179.72	-0.2	126.1	61.8	55.2	6.53	9.457	
2,000.0	1,988.1	2,000.7	1,994.1	5.0	4.3	-179.72	-0.2	135.4	64.8	57.9	6.88	9.420	
2,100.0	2,087.3	2,100.6	2,093.6	5.3	4.6	-179.71	-0.2	144.7	67.9	60.7	7.23	9.388	
2,200.0	2,186.6	2,200.6	2,193.2	5.5	4.8	-179.70	-0.2	153.9	70.9	63.4	7.58	9.358	
2,300.0	2,285.8	2,300.5	2,292.7	5.8	5.0	-179.70	-0.2	163.2	74.0	66.1	7.93	9.331	
2,400.0	2,385.0	2,400.5	2,392.2	6.1	5.3	-179.70	-0.2	172.5	77.0	68.8	8.28	9.306	
2,500.0	2,484.3	2,500.4	2,491.7	6.4	5.5	-179.69	-0.2	181.7	80.1	71.5	8.63	9.283	
2,600.0	2,583.5	2,600.4	2,591.2	6.7	5.8	-179.69	-0.2	191.0	83.2	74.2	8.98	9.262	
2,700.0	2,682.8	2,700.3	2,690.8	6.9	6.0	-179.68	-0.3	200.3	86.2	76.9	9.33	9.243	
2,800.0	2,782.0	2,800.3	2,790.3	7.2	6.2	-179.68	-0.3	209.6	89.3	79.6	9.68	9.225	
2,900.0	2,881.2	2,900.3	2,889.8	7.5	6.5	-179.68	-0.3	218.8	92.3	82.3	10.03	9.208	
3,000.0	2,980.5	3,000.2	2,989.3	7.8	6.7	-179.67	-0.3	228.1	95.4	85.0	10.38	9.192	
3,100.0	3,079.7	3,100.2	3,088.9	8.0	6.9	-179.67	-0.3	237.4	98.4	87.7	10.73	9.177	
3,200.0	3,179.0	3,200.1	3,188.4	8.3	7.2	-179.67	-0.3	246.7	101.5	90.4	11.08	9.164	
3,300.0	3,278.2	3,300.1	3,287.9	8.6	7.4	-179.67	-0.3	255.9	104.5	93.1	11.42	9.151	
3,400.0	3,377.4	3,400.0	3,387.4	8.9	7.7	-179.66	-0.3	265.2	107.6	95.8	11.77	9.139	
3,500.0	3,476.7	3,500.0	3,486.9	9.2	7.9	-179.66	-0.3	274.5	110.7	98.5	12.12	9.127	
3,600.0	3,575.9	3,599.9	3,586.5	9.4	8.1	-179.66	-0.4	283.8	113.7	101.2	12.47	9.117	
3,700.0	3,675.2	3,699.9	3,686.0	9.7	8.4	-179.66	-0.4	293.0	116.8	103.9	12.82	9.106	
3,800.0	3,774.4	3,799.8	3,785.5	10.0	8.6	-179.66	-0.4	302.3	119.8	106.7	13.17	9.097	
3,900.0	3,873.6	3,899.8	3,885.0	10.3	8.8	-179.65	-0.4	311.6	122.9	109.4	13.52	9.088	
4,000.0	3,972.9	3,999.7	3,984.6	10.5	9.1	-179.65	-0.4	320.8	125.9	112.1	13.87	9.079	
4,100.0	4,072.1	4,099.7	4,084.1	10.8	9.3	-179.65	-0.4	330.1	129.0	114.8	14.22	9.071	
4,200.0	4,171.3	4,199.6	4,183.6	11.1	9.6	-179.65	-0.4	339.4	132.0	117.5	14.57	9.063	
4,300.0	4,270.6	4,299.6	4,283.1	11.4	9.8	-179.65	-0.4	348.7	135.1	120.2	14.92	9.055	
4,400.0	4,369.8	4,399.6	4,382.6	11.7	10.0	-179.65	-0.4	357.9	138.2	122.9	15.27	9.048	
4,500.0	4,469.1	4,499.5	4,482.2	11.9	10.3	-179.64	-0.5	367.2	141.2	125.6	15.62	9.041	
4,600.0	4,568.3	4,599.5	4,581.7	12.2	10.5	-179.64	-0.5	376.5	144.3	128.3	15.97	9.035	
4,700.0	4,667.5	4,699.4	4,681.2	12.5	10.8	-179.64	-0.5	385.8	147.3	131.0	16.32	9.029	
4,800.0	4,766.8	4,799.4	4,780.7	12.8	11.0	-179.64	-0.5	395.0	150.4	133.7	16.67	9.023	
4,900.0	4,866.0	4,899.3	4,880.3	13.0	11.2	-179.64	-0.5	404.3	153.4	136.4	17.02	9.017	
5,000.0	4,965.3	4,999.3	4,979.8	13.3	11.5	-179.64	-0.5	413.6	156.5	139.1	17.37	9.011	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4K-17H-P267 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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
5,100.0	5,064.5	5,099.2	5,079.3	13.6	11.7	-179.64	-0.5	422.9	159.5	141.8	17.72	9.006	
5,200.0	5,163.7	5,199.2	5,178.8	13.9	11.9	-179.64	-0.5	432.1	162.6	144.5	18.06	9.001	
5,300.0	5,263.0	5,299.1	5,278.3	14.2	12.2	-179.64	-0.6	441.4	165.7	147.2	18.41	8.996	
5,400.0	5,362.2	5,399.1	5,377.9	14.4	12.4	-179.63	-0.6	450.7	168.7	149.9	18.76	8.991	
5,500.0	5,461.4	5,499.0	5,477.4	14.7	12.7	-179.63	-0.6	460.0	171.8	152.7	19.11	8.987	
5,600.0	5,560.7	5,599.0	5,576.9	15.0	12.9	-179.63	-0.6	469.2	174.8	155.4	19.46	8.982	
5,700.0	5,659.9	5,698.9	5,676.4	15.3	13.1	-179.63	-0.6	478.5	177.9	158.1	19.81	8.978	
5,800.0	5,759.2	5,798.9	5,775.9	15.5	13.4	-179.63	-0.6	487.8	180.9	160.8	20.16	8.974	
5,900.0	5,858.4	5,898.9	5,875.5	15.8	13.6	-179.63	-0.6	497.0	184.0	163.5	20.51	8.970	
6,000.0	5,957.6	5,998.8	5,975.0	16.1	13.8	-179.63	-0.6	506.3	187.0	166.2	20.86	8.966	
6,100.0	6,056.9	6,098.8	6,074.5	16.4	14.1	-179.63	-0.6	515.6	190.1	168.9	21.21	8.963	
6,200.0	6,156.1	6,198.7	6,174.0	16.7	14.3	-179.63	-0.7	524.9	193.2	171.6	21.56	8.959	
6,300.0	6,255.4	6,298.7	6,273.6	16.9	14.6	-179.63	-0.7	534.1	196.2	174.3	21.91	8.956	
6,400.0	6,354.6	6,398.6	6,373.1	17.2	14.8	-179.63	-0.7	543.4	199.3	177.0	22.26	8.952	
6,500.0	6,453.8	6,498.6	6,472.6	17.5	15.0	-179.63	-0.7	552.7	202.3	179.7	22.61	8.949	
6,600.0	6,553.1	6,598.5	6,572.1	17.8	15.3	-179.62	-0.7	562.0	205.4	182.4	22.96	8.946	
6,700.0	6,652.3	6,698.5	6,671.6	18.0	15.5	-179.62	-0.7	571.2	208.4	185.1	23.31	8.943	
6,800.0	6,751.6	6,797.7	6,770.3	18.3	15.8	-178.32	4.1	580.4	211.6	187.9	23.67	8.939	
6,900.0	6,850.8	6,892.6	6,862.5	18.6	16.0	-173.02	24.1	589.0	216.4	192.1	24.26	8.919	
6,979.0	6,929.1	6,961.6	6,926.9	18.8	16.2	-166.93	48.1	595.0	224.0	198.8	25.16	8.904	
7,000.0	6,950.0	6,979.0	6,942.6	18.9	16.2	-148.44	55.3	596.5	226.9	201.4	25.51	8.894	
7,050.0	6,999.5	7,019.8	6,978.6	19.0	16.3	-115.45	74.2	599.8	234.6	208.1	26.43	8.876	
7,100.0	7,048.4	7,059.6	7,012.3	19.2	16.5	-96.81	95.1	603.0	243.3	215.9	27.39	8.880	
7,150.0	7,096.4	7,100.0	7,045.0	19.3	16.6	-85.23	118.6	606.0	252.6	224.3	28.34	8.915	
7,200.0	7,143.1	7,137.0	7,073.5	19.4	16.7	-77.34	142.2	608.7	262.4	233.3	29.13	9.009	
7,250.0	7,188.2	7,174.8	7,100.9	19.6	16.9	-71.33	168.1	611.2	272.2	242.5	29.78	9.143	
7,300.0	7,231.4	7,212.0	7,126.1	19.8	17.1	-66.59	195.3	613.6	282.0	251.8	30.24	9.325	
7,350.0	7,272.2	7,250.0	7,150.0	19.9	17.3	-62.71	224.7	615.8	291.5	261.0	30.53	9.548	
7,400.0	7,310.4	7,285.2	7,170.4	20.1	17.5	-59.59	253.3	617.7	300.5	269.9	30.60	9.820	
7,450.0	7,345.8	7,321.2	7,189.4	20.3	17.7	-56.97	283.8	619.5	308.9	278.4	30.52	10.124	
7,500.0	7,377.9	7,356.9	7,206.4	20.6	17.9	-54.79	315.2	621.1	316.7	286.4	30.28	10.459	
7,550.0	7,406.7	7,392.3	7,221.2	20.8	18.2	-52.98	347.3	622.4	323.6	293.7	29.92	10.818	
7,600.0	7,431.8	7,427.5	7,234.0	21.1	18.5	-51.51	380.1	623.6	329.7	300.3	29.46	11.191	
7,650.0	7,453.1	7,462.6	7,244.7	21.4	18.7	-50.33	413.5	624.6	334.9	305.9	28.95	11.567	
7,700.0	7,470.4	7,500.0	7,253.8	21.8	19.1	-49.38	449.7	625.5	339.1	310.7	28.43	11.926	
7,750.0	7,483.6	7,532.3	7,259.8	22.1	19.4	-48.74	481.5	626.0	342.2	314.4	27.89	12.272	
7,800.0	7,492.6	7,567.0	7,264.2	22.5	19.7	-48.29	515.9	626.4	344.4	317.0	27.41	12.566	
7,850.0	7,497.3	7,600.0	7,266.5	22.9	20.0	-48.08	548.8	626.7	345.4	318.5	26.98	12.802	
7,879.2	7,498.0	7,623.5	7,267.0	23.2	20.2	-48.05	572.2	626.7	345.6	318.7	26.82	12.883	
7,887.0	7,498.0	7,629.0	7,267.0	23.3	20.3	-48.05	577.8	626.7	345.6	318.6	26.95	12.824	
7,900.0	7,498.0	7,642.0	7,267.0	23.4	20.4	-48.05	590.8	626.7	345.6	318.4	27.19	12.709	
8,000.0	7,498.0	7,742.0	7,267.0	24.3	21.5	-48.05	690.8	626.7	345.6	316.4	29.12	11.866	
8,100.0	7,498.0	7,842.0	7,267.0	25.4	22.7	-48.05	790.8	626.7	345.6	314.4	31.15	11.093	
8,200.0	7,498.0	7,942.0	7,267.0	26.5	23.9	-48.05	890.8	626.7	345.6	312.3	33.26	10.389	
8,300.0	7,498.0	8,042.0	7,267.0	27.6	25.2	-48.05	990.8	626.7	345.6	310.1	35.44	9.750	
8,400.0	7,498.0	8,142.0	7,267.0	28.9	26.5	-48.05	1,090.8	626.7	345.6	307.9	37.68	9.171	
8,500.0	7,498.0	8,242.0	7,267.0	30.2	27.9	-48.05	1,190.8	626.7	345.6	305.6	39.96	8.647	
8,600.0	7,498.0	8,342.0	7,267.0	31.5	29.4	-48.05	1,290.8	626.7	345.6	303.3	42.28	8.172	
8,700.0	7,498.0	8,442.0	7,267.0	32.9	30.8	-48.05	1,390.8	626.7	345.6	300.9	44.64	7.741	
8,800.0	7,498.0	8,542.0	7,267.0	34.3	32.3	-48.05	1,490.8	626.7	345.6	298.5	47.02	7.348	
8,900.0	7,498.0	8,642.0	7,267.0	35.7	33.8	-48.05	1,590.8	626.7	345.6	296.1	49.43	6.990	
9,000.0	7,498.0	8,742.0	7,267.0	37.2	35.4	-48.05	1,690.8	626.7	345.6	293.7	51.86	6.663	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4K-17H-P267 - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,100.0	7,498.0	8,842.0	7,267.0	38.7	36.9	-48.05	1,790.8	626.7	345.6	291.2	54.31	6.363	
9,200.0	7,498.0	8,942.0	7,267.0	40.2	38.5	-48.05	1,890.8	626.7	345.6	288.8	56.77	6.087	
9,300.0	7,498.0	9,042.0	7,267.0	41.7	40.1	-48.05	1,990.8	626.7	345.6	286.3	59.25	5.832	
9,400.0	7,498.0	9,142.0	7,267.0	43.3	41.7	-48.05	2,090.8	626.7	345.6	283.8	61.74	5.597	
9,500.0	7,498.0	9,242.0	7,267.0	44.8	43.3	-48.05	2,190.8	626.7	345.6	281.3	64.23	5.380	
9,600.0	7,498.0	9,342.0	7,267.0	46.4	45.0	-48.05	2,290.8	626.7	345.6	278.8	66.74	5.177	
9,700.0	7,498.0	9,442.0	7,267.0	48.0	46.6	-48.05	2,390.8	626.7	345.6	276.3	69.26	4.989	
9,800.0	7,498.0	9,542.0	7,267.0	49.6	48.2	-48.05	2,490.8	626.7	345.6	273.8	71.78	4.814	
9,900.0	7,498.0	9,642.0	7,267.0	51.2	49.9	-48.05	2,590.8	626.7	345.6	271.2	74.31	4.650	
10,000.0	7,498.0	9,742.0	7,267.0	52.8	51.6	-48.05	2,690.8	626.7	345.6	268.7	76.85	4.496	
10,100.0	7,498.0	9,842.0	7,267.0	54.4	53.2	-48.05	2,790.8	626.7	345.6	266.2	79.39	4.352	
10,200.0	7,498.0	9,942.0	7,267.0	56.1	54.9	-48.05	2,890.8	626.7	345.6	263.6	81.94	4.217	
10,300.0	7,498.0	10,042.0	7,267.0	57.7	56.6	-48.05	2,990.8	626.7	345.6	261.1	84.49	4.090	
10,400.0	7,498.0	10,142.0	7,267.0	59.4	58.2	-48.05	3,090.8	626.7	345.6	258.5	87.05	3.970	
10,500.0	7,498.0	10,242.0	7,267.0	61.0	59.9	-48.05	3,190.8	626.7	345.6	255.9	89.61	3.856	
10,600.0	7,498.0	10,342.0	7,267.0	62.7	61.6	-48.05	3,290.8	626.7	345.6	253.4	92.18	3.749	
10,700.0	7,498.0	10,442.0	7,267.0	64.3	63.3	-48.05	3,390.8	626.7	345.6	250.8	94.74	3.647	
10,800.0	7,498.0	10,542.0	7,267.0	66.0	65.0	-48.05	3,490.8	626.7	345.6	248.2	97.31	3.551	
10,900.0	7,498.0	10,642.0	7,267.0	67.7	66.7	-48.05	3,590.8	626.7	345.6	245.7	99.88	3.460	
11,000.0	7,498.0	10,742.0	7,267.0	69.4	68.4	-48.05	3,690.8	626.7	345.6	243.1	102.46	3.373	
11,100.0	7,498.0	10,842.0	7,267.0	71.0	70.1	-48.05	3,790.8	626.7	345.6	240.5	105.04	3.290	
11,200.0	7,498.0	10,942.0	7,267.0	72.7	71.8	-48.05	3,890.8	626.7	345.6	237.9	107.62	3.211	
11,300.0	7,498.0	11,042.0	7,267.0	74.4	73.5	-48.05	3,990.8	626.7	345.6	235.4	110.20	3.136	
11,400.0	7,498.0	11,142.0	7,267.0	76.1	75.2	-48.05	4,090.8	626.7	345.6	232.8	112.78	3.064	
11,500.0	7,498.0	11,242.0	7,267.0	77.8	76.9	-48.05	4,190.8	626.7	345.6	230.2	115.37	2.995	
11,600.0	7,498.0	11,342.0	7,267.0	79.5	78.7	-48.05	4,290.8	626.7	345.6	227.6	117.95	2.930	
11,700.0	7,498.0	11,442.0	7,267.0	81.2	80.4	-48.05	4,390.8	626.7	345.6	225.0	120.54	2.867	
11,800.0	7,498.0	11,542.0	7,267.0	82.9	82.1	-48.05	4,490.8	626.7	345.6	222.4	123.13	2.806	
11,900.0	7,498.0	11,642.0	7,267.0	84.6	83.8	-48.05	4,590.8	626.7	345.6	219.8	125.72	2.749	
12,000.0	7,498.0	11,742.0	7,267.0	86.3	85.5	-48.05	4,690.8	626.7	345.6	217.2	128.31	2.693	
12,100.0	7,498.0	11,842.0	7,267.0	88.0	87.2	-48.05	4,790.8	626.7	345.6	214.6	130.91	2.640	
12,200.0	7,498.0	11,942.0	7,267.0	89.7	89.0	-48.05	4,890.8	626.7	345.6	212.0	133.50	2.588	
12,300.0	7,498.0	12,042.0	7,267.0	91.4	90.7	-48.05	4,990.8	626.7	345.6	209.5	136.10	2.539	
12,400.0	7,498.0	12,142.0	7,267.0	93.1	92.4	-48.05	5,090.8	626.7	345.6	206.9	138.70	2.491	
12,500.0	7,498.0	12,242.0	7,267.0	94.9	94.1	-48.05	5,190.8	626.7	345.6	204.3	141.29	2.446	
12,600.0	7,498.0	12,342.0	7,267.0	96.6	95.9	-48.05	5,290.8	626.7	345.6	201.7	143.89	2.401	
12,700.0	7,498.0	12,442.0	7,267.0	98.3	97.6	-48.05	5,390.8	626.7	345.6	199.1	146.49	2.359	
12,800.0	7,498.0	12,542.0	7,267.0	100.0	99.3	-48.05	5,490.8	626.7	345.6	196.5	149.09	2.318	
12,909.2	7,498.0	12,651.2	7,267.0	101.9	101.2	-48.05	5,600.0	626.7	345.6	193.6	151.93	2.274	
13,000.0	7,498.0	12,742.0	7,267.0	103.4	102.8	-47.97	5,690.8	626.7	345.0	191.3	153.77	2.244	
13,100.0	7,498.0	12,842.0	7,267.0	105.2	104.5	-47.68	5,790.7	626.7	343.2	187.9	155.29	2.210	
13,113.0	7,498.0	12,854.9	7,267.0	105.4	104.7	-47.63	5,803.7	626.7	342.9	187.4	155.45	2.206	
13,200.0	7,498.0	12,941.9	7,267.0	106.9	106.3	-47.28	5,890.7	626.7	340.6	183.7	156.87	2.171	
13,300.0	7,498.0	13,041.8	7,267.0	108.6	108.0	-46.87	5,990.6	626.7	338.0	179.5	158.46	2.133	
13,400.0	7,498.0	13,141.8	7,267.0	110.3	109.7	-46.45	6,090.6	626.7	335.4	175.4	159.99	2.096	
13,500.0	7,498.0	13,241.7	7,267.0	112.0	111.5	-46.03	6,190.5	626.7	332.8	171.4	161.46	2.061	
13,600.0	7,498.0	13,341.6	7,267.0	113.7	113.2	-45.60	6,290.4	626.7	330.3	167.4	162.88	2.028	
13,700.0	7,498.0	13,441.6	7,267.0	115.5	114.9	-45.17	6,390.4	626.7	327.7	163.5	164.23	1.996	
13,800.0	7,498.0	13,541.5	7,267.0	117.2	116.7	-44.73	6,490.3	626.7	325.2	159.7	165.52	1.965	
13,855.2	7,498.0	13,596.6	7,267.0	118.1	117.6	-44.48	6,545.4	626.7	323.9	157.6	166.21	1.948	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DECHANT STATE V 16-12JI (EXISTING) - KMG - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8128-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,600.0	7,431.8	7,415.8	7,415.8	21.1	12.9	37.39	1,212.4	1,267.4	991.4	969.2	22.18	44.691	
7,650.0	7,453.1	7,437.1	7,437.1	21.4	13.0	45.15	1,212.4	1,267.4	949.0	926.0	22.97	41.307	
7,700.0	7,470.4	7,454.4	7,454.4	21.8	13.0	54.30	1,212.4	1,267.4	905.6	880.9	24.64	36.750	
7,750.0	7,483.6	7,467.6	7,467.6	22.1	13.0	64.51	1,212.4	1,267.4	861.5	834.8	26.76	32.194	
7,800.0	7,492.6	7,476.6	7,476.6	22.5	13.0	75.02	1,212.4	1,267.4	817.3	788.7	28.67	28.510	
7,850.0	7,497.3	7,481.3	7,481.3	22.9	13.1	84.87	1,212.4	1,267.4	773.5	743.6	29.88	25.888	
7,879.2	7,498.0	7,482.0	7,482.0	23.2	13.1	90.00	1,212.4	1,267.4	748.2	718.0	30.22	24.759	
7,900.0	7,498.0	7,482.0	7,482.0	23.4	13.1	90.00	1,212.4	1,267.4	730.5	700.0	30.47	23.973	
8,000.0	7,498.0	7,482.0	7,482.0	24.3	13.1	90.00	1,212.4	1,267.4	647.5	615.8	31.73	20.409	
8,100.0	7,498.0	7,482.0	7,482.0	25.4	13.1	90.00	1,212.4	1,267.4	570.0	537.0	33.06	17.243	
8,200.0	7,498.0	7,482.0	7,482.0	26.5	13.1	90.00	1,212.4	1,267.4	500.6	466.2	34.45	14.532	
8,300.0	7,498.0	7,482.0	7,482.0	27.6	13.1	90.00	1,212.4	1,267.4	443.1	407.2	35.89	12.344	
8,400.0	7,498.0	7,482.0	7,482.0	28.9	13.1	90.00	1,212.4	1,267.4	402.5	365.1	37.38	10.768	
8,500.0	7,498.0	7,482.0	7,482.0	30.2	13.1	90.00	1,212.4	1,267.4	384.3	345.4	38.89	9.881	
8,521.6	7,498.0	7,482.0	7,482.0	30.5	13.1	90.00	1,212.4	1,267.4	383.7	344.5	39.23	9.781	CC, ES
8,600.0	7,498.0	7,482.0	7,482.0	31.5	13.1	90.00	1,212.4	1,267.4	391.6	351.2	40.44	9.684	SF
8,700.0	7,498.0	7,482.0	7,482.0	32.9	13.1	90.00	1,212.4	1,267.4	423.1	381.1	42.01	10.073	
8,800.0	7,498.0	7,482.0	7,482.0	34.3	13.1	90.00	1,212.4	1,267.4	474.1	430.5	43.60	10.873	
8,900.0	7,498.0	7,482.0	7,482.0	35.7	13.1	90.00	1,212.4	1,267.4	538.9	493.7	45.21	11.921	
9,000.0	7,498.0	7,482.0	7,482.0	37.2	13.1	90.00	1,212.4	1,267.4	613.3	566.4	46.83	13.097	
9,100.0	7,498.0	7,482.0	7,482.0	38.7	13.1	90.00	1,212.4	1,267.4	694.1	645.6	48.46	14.323	
9,200.0	7,498.0	7,482.0	7,482.0	40.2	13.1	90.00	1,212.4	1,267.4	779.4	729.3	50.11	15.555	
9,300.0	7,498.0	7,482.0	7,482.0	41.7	13.1	90.00	1,212.4	1,267.4	867.8	816.1	51.76	16.767	
9,400.0	7,498.0	7,482.0	7,482.0	43.3	13.1	90.00	1,212.4	1,267.4	958.6	905.1	53.42	17.943	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DECHANT STATE V 16-4JI (EXISTING) - KMG - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8250-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,300.0	7,498.0	7,471.0	7,471.0	57.7	13.0	90.00	3,742.7	1,505.4	975.7	907.0	68.62	14.218	
10,400.0	7,498.0	7,471.0	7,471.0	59.4	13.0	90.00	3,742.7	1,505.4	900.8	830.5	70.33	12.808	
10,500.0	7,498.0	7,471.0	7,471.0	61.0	13.0	90.00	3,742.7	1,505.4	831.4	759.3	72.04	11.539	
10,600.0	7,498.0	7,471.0	7,471.0	62.7	13.0	90.00	3,742.7	1,505.4	768.6	694.9	73.76	10.421	
10,700.0	7,498.0	7,471.0	7,471.0	64.3	13.0	90.00	3,742.7	1,505.4	714.4	638.9	75.48	9.465	
10,800.0	7,498.0	7,471.0	7,471.0	66.0	13.0	90.00	3,742.7	1,505.4	670.8	593.6	77.20	8.690	
10,900.0	7,498.0	7,471.0	7,471.0	67.7	13.0	90.00	3,742.7	1,505.4	640.0	561.1	78.92	8.110	
11,000.0	7,498.0	7,471.0	7,471.0	69.4	13.0	90.00	3,742.7	1,505.4	623.9	543.3	80.64	7.737	
11,051.9	7,498.0	7,471.0	7,471.0	70.2	13.0	90.00	3,742.7	1,505.4	621.7	540.2	81.53	7.626	CC, ES
11,100.0	7,498.0	7,471.0	7,471.0	71.0	13.0	90.00	3,742.7	1,505.4	623.6	541.2	82.36	7.571	SF
11,200.0	7,498.0	7,471.0	7,471.0	72.7	13.0	90.00	3,742.7	1,505.4	639.1	555.1	84.09	7.601	
11,300.0	7,498.0	7,471.0	7,471.0	74.4	13.0	90.00	3,742.7	1,505.4	669.4	583.6	85.82	7.801	
11,400.0	7,498.0	7,471.0	7,471.0	76.1	13.0	90.00	3,742.7	1,505.4	712.6	625.0	87.54	8.139	
11,500.0	7,498.0	7,471.0	7,471.0	77.8	13.0	90.00	3,742.7	1,505.4	766.4	677.1	89.27	8.585	
11,600.0	7,498.0	7,471.0	7,471.0	79.5	13.0	90.00	3,742.7	1,505.4	828.9	737.8	91.00	9.108	
11,700.0	7,498.0	7,471.0	7,471.0	81.2	13.0	90.00	3,742.7	1,505.4	898.1	805.4	92.74	9.685	
11,800.0	7,498.0	7,471.0	7,471.0	82.9	13.0	90.00	3,742.7	1,505.4	972.7	878.3	94.47	10.297	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DECHANT STATE V 16-5JI (EXISTING) - KMG - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8200-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,700.0	7,498.0	7,487.0	7,487.0	32.9	13.1	90.00	2,250.6	1,267.3	941.5	899.5	42.02	22.407	
8,800.0	7,498.0	7,487.0	7,487.0	34.3	13.1	90.00	2,250.6	1,267.3	851.1	807.5	43.61	19.518	
8,900.0	7,498.0	7,487.0	7,487.0	35.7	13.1	90.00	2,250.6	1,267.3	763.2	718.0	45.21	16.880	
9,000.0	7,498.0	7,487.0	7,487.0	37.2	13.1	90.00	2,250.6	1,267.3	678.6	631.8	46.84	14.490	
9,100.0	7,498.0	7,487.0	7,487.0	38.7	13.1	90.00	2,250.6	1,267.3	598.8	550.3	48.47	12.355	
9,200.0	7,498.0	7,487.0	7,487.0	40.2	13.1	90.00	2,250.6	1,267.3	525.9	475.8	50.11	10.495	
9,300.0	7,498.0	7,487.0	7,487.0	41.7	13.1	90.00	2,250.6	1,267.3	463.3	411.5	51.77	8.950	
9,400.0	7,498.0	7,487.0	7,487.0	43.3	13.1	90.00	2,250.6	1,267.3	415.6	362.1	53.43	7.778	
9,500.0	7,498.0	7,487.0	7,487.0	44.8	13.1	90.00	2,250.6	1,267.3	388.3	333.2	55.10	7.046	
9,559.8	7,498.0	7,487.0	7,487.0	45.8	13.1	90.00	2,250.6	1,267.3	383.6	327.5	56.10	6.838	CC, ES
9,600.0	7,498.0	7,487.0	7,487.0	46.4	13.1	90.00	2,250.6	1,267.3	385.7	329.0	56.78	6.794	SF
9,700.0	7,498.0	7,487.0	7,487.0	48.0	13.1	90.00	2,250.6	1,267.3	408.5	350.0	58.46	6.987	
9,800.0	7,498.0	7,487.0	7,487.0	49.6	13.1	90.00	2,250.6	1,267.3	452.6	392.5	60.15	7.525	
9,900.0	7,498.0	7,487.0	7,487.0	51.2	13.1	90.00	2,250.6	1,267.3	512.8	450.9	61.84	8.292	
10,000.0	7,498.0	7,487.0	7,487.0	52.8	13.1	90.00	2,250.6	1,267.3	583.9	520.4	63.54	9.190	
10,100.0	7,498.0	7,487.0	7,487.0	54.4	13.1	90.00	2,250.6	1,267.3	662.6	597.3	65.24	10.156	
10,200.0	7,498.0	7,487.0	7,487.0	56.1	13.1	90.00	2,250.6	1,267.3	746.4	679.4	66.94	11.149	
10,300.0	7,498.0	7,487.0	7,487.0	57.7	13.1	90.00	2,250.6	1,267.3	833.7	765.1	68.65	12.145	
10,400.0	7,498.0	7,487.0	7,487.0	59.4	13.1	90.00	2,250.6	1,267.3	923.7	853.3	70.36	13.128	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DECHANT-STATE 3 (EXISTING) - FOUNDATION - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 5100-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
3,600.0	3,575.9	3,571.9	3,571.9	9.4	6.2	14.94	-259.3	1,356.9	994.0	981.3	12.71	78.233	
3,700.0	3,675.2	3,671.2	3,671.2	9.7	6.4	15.12	-259.3	1,356.9	982.1	969.0	13.07	75.153	
3,800.0	3,774.4	3,770.4	3,770.4	10.0	6.6	15.31	-259.3	1,356.9	970.2	956.8	13.43	72.237	
3,900.0	3,873.6	3,869.6	3,869.6	10.3	6.8	15.51	-259.3	1,356.9	958.3	944.5	13.79	69.471	
4,000.0	3,972.9	3,968.9	3,968.9	10.5	6.9	15.71	-259.3	1,356.9	946.5	932.3	14.16	66.845	
4,100.0	4,072.1	4,068.1	4,068.1	10.8	7.1	15.91	-259.3	1,356.9	934.6	920.1	14.52	64.348	
4,200.0	4,171.3	4,167.3	4,167.3	11.1	7.3	16.12	-259.3	1,356.9	922.8	907.9	14.89	61.971	
4,300.0	4,270.6	4,266.6	4,266.6	11.4	7.4	16.33	-259.3	1,356.9	910.9	895.7	15.26	59.706	
4,400.0	4,369.8	4,365.8	4,365.8	11.7	7.6	16.55	-259.3	1,356.9	899.1	883.5	15.62	57.545	
4,500.0	4,469.1	4,465.1	4,465.1	11.9	7.8	16.78	-259.3	1,356.9	887.3	871.3	15.99	55.480	
4,600.0	4,568.3	4,564.3	4,564.3	12.2	8.0	17.01	-259.3	1,356.9	875.5	859.1	16.36	53.507	
4,700.0	4,667.5	4,663.5	4,663.5	12.5	8.1	17.25	-259.3	1,356.9	863.7	847.0	16.73	51.618	
4,800.0	4,766.8	4,762.8	4,762.8	12.8	8.3	17.50	-259.3	1,356.9	852.0	834.9	17.10	49.809	
4,900.0	4,866.0	4,862.0	4,862.0	13.0	8.5	17.75	-259.3	1,356.9	840.2	822.8	17.48	48.074	
5,000.0	4,965.3	4,961.3	4,961.3	13.3	8.7	18.01	-259.3	1,356.9	828.5	810.6	17.85	46.410	
5,100.0	5,064.5	5,060.5	5,060.5	13.6	8.8	18.28	-259.3	1,356.9	816.8	798.6	18.23	44.812	
5,200.0	5,163.7	5,100.0	5,100.0	13.9	8.9	18.38	-259.3	1,356.9	807.3	788.8	18.49	43.663	
5,234.8	5,198.3	5,100.0	5,100.0	14.0	8.9	18.38	-259.3	1,356.9	806.6	788.0	18.55	43.469	CC, ES
5,300.0	5,263.0	5,100.0	5,100.0	14.2	8.9	18.38	-259.3	1,356.9	809.2	790.5	18.68	43.325	SF
5,400.0	5,362.2	5,100.0	5,100.0	14.4	8.9	18.38	-259.3	1,356.9	823.3	804.4	18.86	43.642	
5,500.0	5,461.4	5,100.0	5,100.0	14.7	8.9	18.38	-259.3	1,356.9	849.0	830.0	19.05	44.563	
5,600.0	5,560.7	5,100.0	5,100.0	15.0	8.9	18.38	-259.3	1,356.9	885.4	866.1	19.24	46.017	
5,700.0	5,659.9	5,100.0	5,100.0	15.3	8.9	18.38	-259.3	1,356.9	931.1	911.7	19.43	47.926	
5,800.0	5,759.2	5,100.0	5,100.0	15.5	8.9	18.38	-259.3	1,356.9	984.9	965.3	19.62	50.209	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DECHANT-STATE 9 (EXISTING) - KMG - NO SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 8150-Geolink MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
6,200.0	6,156.1	6,164.1	6,164.1	16.7	10.8	-0.75	6.6	1,712.0	994.9	973.4	21.49	46.292	
6,300.0	6,255.4	6,263.4	6,263.4	16.9	10.9	-0.76	6.6	1,712.0	982.6	960.7	21.84	44.992	
6,400.0	6,354.6	6,362.6	6,362.6	17.2	11.1	-0.76	6.6	1,712.0	970.3	948.1	22.19	43.733	
6,500.0	6,453.8	6,461.8	6,461.8	17.5	11.3	-0.77	6.6	1,712.0	957.9	935.4	22.53	42.512	
6,600.0	6,553.1	6,561.1	6,561.1	17.8	11.5	-0.78	6.6	1,712.0	945.6	922.8	22.88	41.329	
6,700.0	6,652.3	6,660.3	6,660.3	18.0	11.6	-0.80	6.6	1,712.0	933.3	910.1	23.23	40.181	
6,800.0	6,751.6	6,759.6	6,759.6	18.3	11.8	-0.81	6.6	1,712.0	921.0	897.4	23.58	39.067	
6,900.0	6,850.8	6,858.8	6,858.8	18.6	12.0	-0.82	6.6	1,712.0	908.7	884.8	23.92	37.985	
6,979.0	6,929.1	6,937.1	6,937.1	18.8	12.1	-0.83	6.6	1,712.0	899.0	874.8	24.20	37.152	
7,000.0	6,950.0	6,958.0	6,958.0	18.9	12.1	15.96	6.6	1,712.0	896.4	872.1	24.27	36.936	
7,050.0	6,999.5	7,007.5	7,007.5	19.0	12.2	45.34	6.6	1,712.0	890.2	865.8	24.44	36.418	
7,100.0	7,048.4	7,056.4	7,056.4	19.2	12.3	61.01	6.6	1,712.0	884.1	859.5	24.64	35.884	
7,150.0	7,096.4	7,104.4	7,104.4	19.3	12.4	70.16	6.6	1,712.0	878.3	853.4	24.86	35.325	
7,200.0	7,143.1	7,151.1	7,151.1	19.4	12.5	76.38	6.6	1,712.0	873.0	847.8	25.13	34.739	
7,250.0	7,188.2	7,196.2	7,196.2	19.6	12.6	81.12	6.6	1,712.0	868.4	843.0	25.44	34.135	
7,300.0	7,231.4	7,239.4	7,239.4	19.8	12.6	84.99	6.6	1,712.0	864.9	839.1	25.79	33.538	
7,350.0	7,272.2	7,280.2	7,280.2	19.9	12.7	88.27	6.6	1,712.0	862.9	836.7	26.16	32.980	
7,380.0	7,295.4	7,303.4	7,303.4	20.0	12.7	90.00	6.6	1,712.0	862.6	836.2	26.40	32.675	CC, ES
7,400.0	7,310.4	7,318.4	7,318.4	20.1	12.8	91.06	6.6	1,712.0	862.7	836.2	26.55	32.496	
7,450.0	7,345.8	7,353.8	7,353.8	20.3	12.8	93.40	6.6	1,712.0	864.7	837.8	26.92	32.117	
7,500.0	7,377.9	7,385.9	7,385.9	20.6	12.9	95.26	6.6	1,712.0	869.3	842.0	27.28	31.862	
7,550.0	7,406.7	7,414.7	7,414.7	20.8	12.9	96.62	6.6	1,712.0	876.6	849.0	27.62	31.738	SF
7,600.0	7,431.8	7,439.8	7,439.8	21.1	13.0	97.44	6.6	1,712.0	887.1	859.1	27.95	31.739	
7,650.0	7,453.1	7,461.1	7,461.1	21.4	13.0	97.67	6.6	1,712.0	900.6	872.4	28.28	31.850	
7,700.0	7,470.4	7,478.4	7,478.4	21.8	13.1	97.27	6.6	1,712.0	917.4	888.8	28.63	32.046	
7,750.0	7,483.6	7,491.6	7,491.6	22.1	13.1	96.19	6.6	1,712.0	937.3	908.3	29.02	32.301	
7,800.0	7,492.6	7,500.6	7,500.6	22.5	13.1	94.39	6.6	1,712.0	960.1	930.7	29.46	32.594	
7,850.0	7,497.3	7,505.3	7,505.3	22.9	13.1	91.84	6.6	1,712.0	985.7	955.7	29.95	32.909	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 1 (EXISTING) - ENCANA WELL - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,100.0	7,498.0	7,427.1	7,426.2	105.2	13.0	-87.63	6,362.9	141.0	935.5	819.2	116.32	8.042	
13,113.0	7,498.0	7,427.2	7,426.3	105.4	13.0	-87.63	6,362.9	141.0	927.3	810.8	116.51	7.959	
13,200.0	7,498.0	7,428.1	7,427.2	106.9	13.0	-87.70	6,362.9	140.9	875.0	757.0	118.03	7.413	
13,300.0	7,498.0	7,429.1	7,428.1	108.6	13.0	-87.78	6,362.9	140.9	822.2	702.4	119.78	6.864	
13,400.0	7,498.0	7,430.0	7,429.1	110.3	13.0	-87.86	6,362.9	140.9	778.7	657.2	121.53	6.408	
13,500.0	7,498.0	7,430.9	7,430.0	112.0	13.0	-87.93	6,362.9	140.8	746.1	622.9	123.28	6.053	
13,600.0	7,498.0	7,431.9	7,430.9	113.7	13.0	-88.00	6,362.9	140.8	726.0	601.0	125.03	5.807	
13,698.1	7,498.0	7,432.7	7,431.8	115.4	13.0	-88.07	6,363.0	140.8	719.4	592.6	126.74	5.676	CC
13,700.0	7,498.0	7,432.8	7,431.8	115.5	13.0	-88.07	6,363.0	140.8	719.4	592.6	126.78	5.674	ES
13,800.0	7,498.0	7,433.6	7,432.7	117.2	13.0	-88.14	6,363.0	140.7	726.5	598.0	128.52	5.653	SF
13,855.2	7,498.0	7,434.1	7,433.2	118.1	13.1	-88.18	6,363.0	140.7	736.3	606.8	129.49	5.686	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 44-8 (EXISTING) - ENCANA WELL - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,400.0	7,498.0	7,500.0	7,496.5	76.1	13.3	-93.15	4,771.7	256.7	926.2	838.7	87.51	10.584	
11,500.0	7,498.0	7,500.0	7,496.5	77.8	13.3	-93.15	4,771.7	256.7	855.4	766.1	89.23	9.586	
11,600.0	7,498.0	7,496.1	7,492.6	79.5	13.3	-92.79	4,771.7	256.6	790.9	699.9	90.98	8.693	
11,700.0	7,498.0	7,494.3	7,490.7	81.2	13.3	-92.62	4,771.8	256.5	734.4	641.6	92.72	7.920	
11,800.0	7,498.0	7,492.4	7,488.8	82.9	13.3	-92.45	4,771.8	256.5	687.8	593.4	94.46	7.282	
11,900.0	7,498.0	7,490.5	7,486.9	84.6	13.3	-92.28	4,771.8	256.4	653.4	557.2	96.20	6.792	
12,000.0	7,498.0	7,488.5	7,485.0	86.3	13.3	-92.10	4,771.9	256.4	633.0	535.0	97.93	6.463	
12,081.1	7,498.0	7,487.0	7,483.5	87.7	13.3	-91.96	4,771.9	256.3	627.8	528.4	99.35	6.319	CC
12,100.0	7,498.0	7,486.6	7,483.1	88.0	13.3	-91.93	4,771.9	256.3	628.1	528.4	99.68	6.301	ES
12,200.0	7,498.0	7,484.7	7,481.1	89.7	13.3	-91.75	4,772.0	256.2	638.9	537.5	101.42	6.300	SF
12,300.0	7,498.0	7,482.7	7,479.2	91.4	13.3	-91.57	4,772.0	256.2	664.8	561.7	103.16	6.445	
12,400.0	7,498.0	7,480.7	7,477.2	93.1	13.3	-91.39	4,772.0	256.1	704.1	599.2	104.90	6.712	
12,500.0	7,498.0	7,478.7	7,475.2	94.9	13.3	-91.20	4,772.1	256.0	754.6	648.0	106.64	7.077	
12,600.0	7,498.0	7,476.6	7,473.1	96.6	13.3	-91.02	4,772.1	255.9	814.4	706.0	108.38	7.514	
12,700.0	7,498.0	7,474.6	7,471.1	98.3	13.3	-90.83	4,772.2	255.9	881.4	771.3	110.12	8.005	
12,800.0	7,498.0	7,472.5	7,469.0	100.0	13.3	-90.64	4,772.2	255.8	954.3	842.4	111.86	8.531	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 78-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,300.0	7,498.0	7,529.8	7,439.8	108.6	18.8	-73.12	6,920.8	760.7	937.3	819.8	117.52	7.975	
13,400.0	7,498.0	7,532.6	7,442.6	110.3	18.8	-74.96	6,920.9	760.7	837.7	717.5	120.24	6.967	
13,500.0	7,498.0	7,535.3	7,445.4	112.0	18.8	-76.84	6,920.9	760.8	738.3	615.4	122.89	6.007	
13,600.0	7,498.0	7,538.1	7,448.2	113.7	18.8	-78.75	6,921.0	760.8	639.0	513.5	125.47	5.093	
13,700.0	7,498.0	7,540.9	7,451.0	115.5	18.8	-80.69	6,921.1	760.9	539.9	412.0	127.94	4.220	
13,800.0	7,498.0	7,543.7	7,453.8	117.2	18.8	-82.65	6,921.2	761.0	441.3	311.0	130.30	3.386	
13,855.2	7,498.0	7,545.2	7,455.3	118.1	18.8	-83.74	6,921.2	761.0	387.1	255.6	131.55	2.943	CC, ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 52-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,000.0	7,498.0	7,570.9	7,461.8	86.3	21.5	-89.01	5,623.6	756.3	941.5	837.5	104.00	9.052	
12,100.0	7,498.0	7,570.7	7,461.5	88.0	21.5	-88.88	5,623.6	756.3	842.5	736.8	105.73	7.968	
12,200.0	7,498.0	7,570.4	7,461.2	89.7	21.5	-88.76	5,623.6	756.3	743.8	636.3	107.46	6.921	
12,300.0	7,498.0	7,570.1	7,461.0	91.4	21.5	-88.64	5,623.6	756.3	645.5	536.3	109.19	5.912	
12,400.0	7,498.0	7,569.8	7,460.7	93.1	21.5	-88.52	5,623.6	756.3	547.8	436.9	110.92	4.939	
12,500.0	7,498.0	7,569.6	7,460.4	94.9	21.5	-88.40	5,623.6	756.3	451.2	338.5	112.65	4.005	
12,600.0	7,498.0	7,569.3	7,460.2	96.6	21.5	-88.28	5,623.6	756.3	356.4	242.0	114.38	3.116	
12,700.0	7,498.0	7,569.0	7,459.9	98.3	21.5	-88.16	5,623.6	756.3	265.4	149.3	116.11	2.286	
12,800.0	7,498.0	7,568.8	7,459.6	100.0	21.5	-88.04	5,623.6	756.3	184.1	66.2	117.84	1.562	
12,909.2	7,498.0	7,568.5	7,459.3	101.9	21.5	-87.91	5,623.6	756.3	129.6	9.9	119.73	1.083	Level 2
12,933.3	7,498.0	7,568.4	7,459.3	102.3	21.5	-87.88	5,623.6	756.3	127.4	7.3	120.11	1.061	Level 2, CC, ES, SF
13,000.0	7,498.0	7,568.3	7,459.1	103.4	21.5	-87.81	5,623.6	756.3	143.4	22.3	121.16	1.184	Level 2
13,100.0	7,498.0	7,568.1	7,459.0	105.2	21.5	-87.77	5,623.6	756.4	208.3	85.6	122.71	1.697	
13,113.0	7,498.0	7,568.1	7,458.9	105.4	21.5	-87.77	5,623.6	756.4	218.6	95.7	122.91	1.779	
13,200.0	7,498.0	7,568.0	7,458.8	106.9	21.5	-87.72	5,623.6	756.4	293.1	168.7	124.42	2.356	
13,300.0	7,498.0	7,567.8	7,458.7	108.6	21.5	-87.66	5,623.6	756.4	385.3	259.1	126.15	3.054	
13,400.0	7,498.0	7,567.7	7,458.6	110.3	21.5	-87.60	5,623.6	756.4	480.6	352.7	127.89	3.758	
13,500.0	7,498.0	7,567.6	7,458.4	112.0	21.5	-87.54	5,623.6	756.4	577.5	447.9	129.62	4.455	
13,600.0	7,498.0	7,567.4	7,458.3	113.7	21.5	-87.49	5,623.6	756.4	675.3	543.9	131.36	5.141	
13,700.0	7,498.0	7,567.3	7,458.2	115.5	21.5	-87.43	5,623.6	756.4	773.7	640.6	133.09	5.813	
13,800.0	7,498.0	7,567.2	7,458.0	117.2	21.5	-87.37	5,623.6	756.4	872.4	737.6	134.83	6.470	
13,855.2	7,498.0	7,567.1	7,458.0	118.1	21.5	-87.34	5,623.6	756.4	927.0	791.2	135.79	6.827	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8150-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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	-49.50	403.6	-472.5	622.2				
100.0	100.0	70.0	70.0	0.1	0.1	-49.50	403.6	-472.5	621.5	621.2	0.24	2,541.258	
200.0	200.0	170.0	170.0	0.3	0.3	-49.50	403.6	-472.5	621.5	620.9	0.59	1,046.905	CC, ES
300.0	300.0	270.0	270.0	0.5	0.5	-139.79	403.6	-472.5	622.8	621.8	0.94	659.672	
400.0	399.8	369.8	369.8	0.7	0.6	-140.05	403.6	-472.5	626.8	625.5	1.30	481.742	
500.0	499.5	469.5	469.5	0.9	0.8	-140.47	403.6	-472.5	633.5	631.8	1.67	379.400	
553.7	552.8	522.8	522.8	1.0	0.9	-140.76	403.6	-472.5	638.2	636.4	1.87	340.862	
600.0	598.7	568.7	568.7	1.2	1.0	-141.08	403.6	-472.5	642.7	640.6	2.05	313.672	
700.0	698.0	668.0	668.0	1.4	1.2	-141.75	403.6	-472.5	652.3	649.9	2.43	268.288	
800.0	797.2	767.2	767.2	1.7	1.3	-142.41	403.6	-472.5	662.1	659.3	2.81	235.241	
900.0	896.5	866.5	866.5	2.0	1.5	-143.05	403.6	-472.5	671.9	668.7	3.20	210.172	
1,000.0	995.7	965.7	965.7	2.2	1.7	-143.67	403.6	-472.5	681.8	678.2	3.58	190.538	
1,100.0	1,094.9	1,064.9	1,064.9	2.5	1.9	-144.27	403.6	-472.5	691.8	687.8	3.96	174.761	
1,200.0	1,194.2	1,164.2	1,164.2	2.8	2.0	-144.86	403.6	-472.5	701.9	697.5	4.34	161.818	
1,300.0	1,293.4	1,263.4	1,263.4	3.1	2.2	-145.43	403.6	-472.5	712.0	707.3	4.71	151.015	
1,400.0	1,392.7	1,362.7	1,362.7	3.3	2.4	-145.98	403.6	-472.5	722.2	717.1	5.09	141.867	
1,500.0	1,491.9	1,461.9	1,461.9	3.6	2.6	-146.52	403.6	-472.5	732.5	727.0	5.47	134.024	
1,600.0	1,591.1	1,561.1	1,561.1	3.9	2.7	-147.04	403.6	-472.5	742.8	736.9	5.84	127.228	
1,700.0	1,690.4	1,660.4	1,660.4	4.2	2.9	-147.55	403.6	-472.5	753.2	747.0	6.21	121.284	
1,800.0	1,789.6	1,759.6	1,759.6	4.4	3.1	-148.05	403.6	-472.5	763.6	757.0	6.58	116.044	
1,900.0	1,888.9	1,858.9	1,858.9	4.7	3.2	-148.53	403.6	-472.5	774.1	767.2	6.95	111.390	
2,000.0	1,988.1	1,958.1	1,958.1	5.0	3.4	-149.00	403.6	-472.5	784.7	777.3	7.32	107.231	
2,100.0	2,087.3	2,057.3	2,057.3	5.3	3.6	-149.45	403.6	-472.5	795.3	787.6	7.68	103.492	
2,200.0	2,186.6	2,156.6	2,156.6	5.5	3.8	-149.90	403.6	-472.5	805.9	797.9	8.05	100.114	
2,300.0	2,285.8	2,255.8	2,255.8	5.8	3.9	-150.33	403.6	-472.5	816.6	808.2	8.41	97.047	
2,400.0	2,385.0	2,355.0	2,355.0	6.1	4.1	-150.75	403.6	-472.5	827.4	818.6	8.78	94.250	
2,500.0	2,484.3	2,454.3	2,454.3	6.4	4.3	-151.16	403.6	-472.5	838.1	829.0	9.14	91.691	
2,600.0	2,583.5	2,553.5	2,553.5	6.7	4.5	-151.56	403.6	-472.5	849.0	839.5	9.50	89.340	
2,700.0	2,682.8	2,652.8	2,652.8	6.9	4.6	-151.95	403.6	-472.5	859.8	850.0	9.86	87.173	
2,800.0	2,782.0	2,752.0	2,752.0	7.2	4.8	-152.33	403.6	-472.5	870.7	860.5	10.22	85.169	
2,900.0	2,881.2	2,851.2	2,851.2	7.5	5.0	-152.70	403.6	-472.5	881.7	871.1	10.58	83.312	
3,000.0	2,980.5	2,950.5	2,950.5	7.8	5.1	-153.06	403.6	-472.5	892.7	881.7	10.94	81.585	
3,100.0	3,079.7	3,049.7	3,049.7	8.0	5.3	-153.42	403.6	-472.5	903.7	892.4	11.30	79.976	
3,200.0	3,179.0	3,149.0	3,149.0	8.3	5.5	-153.76	403.6	-472.5	914.7	903.1	11.66	78.474	
3,300.0	3,278.2	3,248.2	3,248.2	8.6	5.7	-154.10	403.6	-472.5	925.8	913.8	12.01	77.067	
3,400.0	3,377.4	3,347.4	3,347.4	8.9	5.8	-154.43	403.6	-472.5	936.9	924.5	12.37	75.748	
3,500.0	3,476.7	3,446.7	3,446.7	9.2	6.0	-154.75	403.6	-472.5	948.1	935.3	12.72	74.508	
3,600.0	3,575.9	3,545.9	3,545.9	9.4	6.2	-155.06	403.6	-472.5	959.2	946.1	13.08	73.341	
3,700.0	3,675.2	3,645.2	3,645.2	9.7	6.4	-155.37	403.6	-472.5	970.4	957.0	13.43	72.240	
3,800.0	3,774.4	3,744.4	3,744.4	10.0	6.5	-155.67	403.6	-472.5	981.6	967.9	13.79	71.201	
3,900.0	3,873.6	3,843.6	3,843.6	10.3	6.7	-155.96	403.6	-472.5	992.9	978.8	14.14	70.217	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 33-17J (EXISTING) - ENCANA - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 608-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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	-96.88	-91.8	-760.2	766.2				
100.0	100.0	74.0	74.0	0.1	0.1	-96.88	-91.8	-760.2	765.8	765.5	0.25	3,044.766	
200.0	200.0	174.0	174.0	0.3	0.3	-96.88	-91.8	-760.2	765.8	765.2	0.60	1,275.141	CC, ES
300.0	300.0	274.0	274.0	0.5	0.5	172.92	-91.8	-760.2	767.5	766.6	0.95	808.525	
400.0	399.8	373.8	373.8	0.7	0.7	172.95	-91.8	-760.2	772.7	771.4	1.30	595.720	
500.0	499.5	473.5	473.5	0.9	0.8	173.01	-91.8	-760.2	781.3	779.7	1.64	475.407	
553.7	552.8	526.8	526.8	1.0	0.9	173.05	-91.8	-760.2	787.4	785.6	1.83	430.557	
600.0	598.7	572.7	572.7	1.2	1.0	173.10	-91.8	-760.2	793.1	791.1	1.99	398.479	
700.0	698.0	669.3	669.3	1.4	1.2	173.20	-91.8	-760.3	805.4	803.1	2.33	345.026	
800.0	797.2	767.1	767.1	1.7	1.3	173.28	-92.2	-760.8	818.1	815.4	2.68	305.182	
900.0	896.5	865.8	865.8	2.0	1.5	173.35	-92.7	-761.2	830.9	827.8	3.03	274.328	
1,000.0	995.7	964.5	964.5	2.2	1.7	173.40	-93.4	-761.7	843.7	840.3	3.38	249.854	
1,100.0	1,094.9	1,063.0	1,063.0	2.5	1.9	173.44	-94.3	-762.3	856.6	852.8	3.72	229.989	
1,200.0	1,194.2	1,161.3	1,161.3	2.8	2.0	173.48	-95.1	-762.9	869.5	865.5	4.07	213.551	
1,300.0	1,293.4	1,259.6	1,259.6	3.1	2.2	173.52	-96.0	-763.7	882.6	878.2	4.42	199.724	
1,400.0	1,392.7	1,357.7	1,357.7	3.3	2.4	173.56	-96.8	-764.5	895.8	891.0	4.77	187.957	
1,500.0	1,491.9	1,455.6	1,455.6	3.6	2.5	173.61	-97.4	-765.5	909.1	904.0	5.11	177.843	
1,600.0	1,591.1	1,553.4	1,553.4	3.9	2.7	173.69	-97.8	-766.6	922.5	917.1	5.46	169.042	
1,700.0	1,690.4	1,651.3	1,651.2	4.2	2.9	173.77	-97.8	-768.0	936.1	930.3	5.80	161.316	
1,800.0	1,789.6	1,749.3	1,749.2	4.4	3.1	173.86	-97.9	-769.4	949.8	943.6	6.15	154.465	
1,900.0	1,888.9	1,847.3	1,847.2	4.7	3.2	173.93	-98.1	-770.9	963.6	957.1	6.49	148.362	
2,000.0	1,988.1	1,945.2	1,945.1	5.0	3.4	173.99	-98.5	-772.5	977.5	970.7	6.84	142.895	
2,100.0	2,087.3	2,041.6	2,041.4	5.3	3.6	174.04	-99.2	-774.3	991.6	984.4	7.18	138.027	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 34-17J (EXISTING) - ENCANA - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 627-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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	-98.06	-110.7	-782.3	790.6				
100.0	100.0	74.0	74.0	0.1	0.1	-98.06	-110.7	-782.3	790.1	789.9	0.25	3,141.637	
200.0	200.0	174.0	174.0	0.3	0.3	-98.06	-110.7	-782.3	790.1	789.5	0.60	1,315.711	CC, ES
300.0	300.0	274.0	274.0	0.5	0.5	171.75	-110.7	-782.3	791.9	790.9	0.95	834.166	
400.0	399.8	373.8	373.8	0.7	0.7	171.79	-110.7	-782.3	797.0	795.7	1.30	614.419	
500.0	499.5	473.5	473.5	0.9	0.8	171.85	-110.7	-782.3	805.7	804.0	1.64	490.070	
553.7	552.8	526.8	526.8	1.0	0.9	171.90	-110.7	-782.3	811.7	809.9	1.83	443.677	
600.0	598.7	572.7	572.7	1.2	1.0	171.95	-110.7	-782.3	817.4	815.4	1.99	410.495	
700.0	698.0	670.6	670.6	1.4	1.2	172.07	-110.8	-782.4	829.6	827.3	2.34	354.832	
800.0	797.2	766.4	766.4	1.7	1.3	172.15	-111.3	-782.6	842.2	839.5	2.68	314.078	
900.0	896.5	861.6	861.6	2.0	1.5	172.22	-111.9	-783.3	855.2	852.1	3.02	282.806	
1,000.0	995.7	956.8	956.8	2.2	1.7	172.29	-112.6	-784.5	868.6	865.3	3.37	258.056	
1,100.0	1,094.9	1,053.2	1,053.1	2.5	1.8	172.36	-113.2	-786.0	882.5	878.8	3.71	237.865	
1,200.0	1,194.2	1,155.6	1,155.5	2.8	2.0	172.44	-113.9	-787.6	896.3	892.2	4.06	220.507	
1,300.0	1,293.4	1,258.1	1,258.0	3.1	2.2	172.51	-114.6	-788.8	909.7	905.3	4.42	205.845	
1,400.0	1,392.7	1,360.0	1,359.9	3.3	2.4	172.58	-115.2	-789.6	922.8	918.0	4.77	193.332	
1,500.0	1,491.9	1,457.1	1,457.1	3.6	2.5	172.65	-115.8	-790.3	935.8	930.7	5.12	182.840	
1,600.0	1,591.1	1,554.2	1,554.2	3.9	2.7	172.73	-116.2	-791.3	949.1	943.6	5.46	173.720	
1,700.0	1,690.4	1,651.3	1,651.2	4.2	2.9	172.80	-116.6	-792.5	962.6	956.8	5.81	165.726	
1,800.0	1,789.6	1,751.4	1,751.3	4.4	3.1	172.89	-116.8	-793.8	976.1	969.9	6.16	158.511	
1,900.0	1,888.9	1,851.8	1,851.7	4.7	3.2	172.99	-116.8	-795.0	989.5	983.0	6.51	152.043	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8150-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,750.0	7,483.6	7,461.6	7,461.6	22.1	13.0	-80.93	1,048.0	87.2	999.5	970.6	28.89	34.596	
7,800.0	7,492.6	7,470.6	7,470.6	22.5	13.0	-84.73	1,048.0	87.2	971.4	942.0	29.39	33.056	
7,850.0	7,497.3	7,475.3	7,475.3	22.9	13.0	-88.18	1,048.0	87.2	944.2	914.3	29.90	31.578	
7,879.2	7,498.0	7,476.0	7,476.0	23.2	13.0	-90.00	1,048.0	87.2	928.9	898.7	30.21	30.748	
7,900.0	7,498.0	7,476.0	7,476.0	23.4	13.0	-90.00	1,048.0	87.2	918.4	887.9	30.46	30.151	
8,000.0	7,498.0	7,476.0	7,476.0	24.3	13.0	-90.00	1,048.0	87.2	872.9	841.2	31.72	27.523	
8,100.0	7,498.0	7,476.0	7,476.0	25.4	13.0	-90.00	1,048.0	87.2	837.0	803.9	33.05	25.326	
8,200.0	7,498.0	7,476.0	7,476.0	26.5	13.0	-90.00	1,048.0	87.2	811.8	777.4	34.44	23.572	
8,300.0	7,498.0	7,476.0	7,476.0	27.6	13.0	-90.00	1,048.0	87.2	798.5	762.6	35.88	22.254	
8,357.3	7,498.0	7,476.0	7,476.0	28.3	13.0	-90.00	1,048.0	87.2	796.5	759.7	36.73	21.683	CC, ES
8,400.0	7,498.0	7,476.0	7,476.0	28.9	13.0	-90.00	1,048.0	87.2	797.6	760.2	37.37	21.346	
8,500.0	7,498.0	7,476.0	7,476.0	30.2	13.0	-90.00	1,048.0	87.2	809.2	770.3	38.88	20.810	
8,600.0	7,498.0	7,476.0	7,476.0	31.5	13.0	-90.00	1,048.0	87.2	832.6	792.2	40.43	20.595	SF
8,700.0	7,498.0	7,476.0	7,476.0	32.9	13.0	-90.00	1,048.0	87.2	867.1	825.1	42.00	20.645	
8,800.0	7,498.0	7,476.0	7,476.0	34.3	13.0	-90.00	1,048.0	87.2	911.3	867.7	43.59	20.906	
8,900.0	7,498.0	7,476.0	7,476.0	35.7	13.0	-90.00	1,048.0	87.2	963.8	918.6	45.19	21.326	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 44-17J (EXISTING) - ENCANA - SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 642-Geolink MWD — **Offset Well Error:** 0.0 ft

Reference 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	-98.64	-111.1	-731.2	740.0				
100.0	100.0	74.0	74.0	0.1	0.1	-98.64	-111.1	-731.2	739.6	739.3	0.25	2,940.547	
200.0	200.0	174.0	174.0	0.3	0.3	-98.64	-111.1	-731.2	739.6	739.0	0.60	1,231.495	CC, ES
300.0	300.0	274.0	274.0	0.5	0.5	171.17	-111.1	-731.2	741.3	740.3	0.95	780.875	
400.0	399.8	373.8	373.8	0.7	0.7	171.21	-111.1	-731.2	746.5	745.2	1.30	575.388	
500.0	499.5	473.5	473.5	0.9	0.8	171.29	-111.1	-731.2	755.1	753.4	1.64	459.223	
553.7	552.8	526.8	526.8	1.0	0.9	171.34	-111.1	-731.2	761.1	759.3	1.83	415.931	
600.0	598.7	572.7	572.7	1.2	1.0	171.40	-111.1	-731.2	766.8	764.8	1.99	384.981	
700.0	698.0	673.4	673.4	1.4	1.2	171.57	-110.7	-731.2	778.9	776.6	2.34	332.335	
800.0	797.2	772.1	772.0	1.7	1.3	171.83	-108.9	-731.3	790.9	788.3	2.69	293.675	
900.0	896.5	870.7	870.7	2.0	1.5	172.09	-107.1	-731.5	803.1	800.0	3.04	263.944	
1,000.0	995.7	969.3	969.3	2.2	1.7	172.35	-105.1	-731.8	815.3	811.9	3.39	240.380	
1,100.0	1,094.9	1,065.1	1,065.1	2.5	1.9	172.60	-103.0	-732.3	827.8	824.0	3.74	221.479	
1,200.0	1,194.2	1,160.7	1,160.6	2.8	2.0	172.86	-100.9	-733.2	840.7	836.6	4.08	205.908	
1,300.0	1,293.4	1,256.2	1,256.1	3.1	2.2	173.12	-98.7	-734.5	854.0	849.6	4.43	192.882	
1,400.0	1,392.7	1,361.2	1,361.0	3.3	2.4	173.37	-96.6	-736.0	867.4	862.6	4.78	181.327	
1,500.0	1,491.9	1,470.6	1,470.4	3.6	2.6	173.53	-95.8	-736.1	879.7	874.5	5.15	170.957	
1,600.0	1,591.1	1,580.4	1,580.2	3.9	2.8	173.57	-96.5	-734.8	890.8	885.3	5.51	161.699	
1,700.0	1,690.4	1,669.4	1,669.2	4.2	2.9	173.63	-96.7	-733.6	901.8	895.9	5.84	154.375	
1,800.0	1,789.6	1,785.5	1,785.2	4.4	3.1	173.92	-93.5	-732.7	913.0	906.8	6.22	146.758	
1,900.0	1,888.9	1,901.0	1,900.6	4.7	3.3	174.21	-90.0	-728.9	921.6	915.0	6.60	139.650	
2,000.0	1,988.1	1,988.5	1,988.0	5.0	3.5	174.29	-89.5	-726.0	930.5	923.6	6.93	134.353	
2,100.0	2,087.3	2,084.1	2,083.6	5.3	3.7	174.32	-89.9	-723.5	940.2	933.0	7.27	129.379	
2,200.0	2,186.6	2,180.3	2,179.8	5.5	3.8	174.36	-90.3	-721.3	950.3	942.7	7.61	124.882	
2,300.0	2,285.8	2,276.9	2,276.4	5.8	4.0	174.40	-90.6	-719.5	960.7	952.8	7.95	120.795	
2,400.0	2,385.0	2,373.5	2,372.9	6.1	4.2	174.46	-90.6	-718.0	971.4	963.1	8.30	117.085	
2,500.0	2,484.3	2,471.0	2,470.4	6.4	4.3	174.53	-90.4	-716.7	982.4	973.7	8.64	113.677	
2,600.0	2,583.5	2,570.9	2,570.4	6.7	4.5	174.63	-89.9	-715.5	993.4	984.4	8.99	110.470	
6,100.0	6,056.9	6,555.2	6,425.6	16.4	16.0	162.08	-294.3	-166.1	999.7	975.3	24.45	40.889	
6,200.0	6,156.1	6,669.7	6,525.8	16.7	16.9	160.33	-311.2	-113.2	970.2	944.8	25.41	38.184	
6,300.0	6,255.4	6,732.4	6,581.1	16.9	17.4	159.39	-319.4	-84.9	941.9	915.9	26.03	36.186	
6,400.0	6,354.6	6,815.2	6,655.2	17.2	18.0	158.15	-330.4	-49.7	916.8	890.0	26.82	34.184	
6,500.0	6,453.8	6,879.0	6,712.7	17.5	18.4	157.13	-339.8	-23.8	894.4	866.9	27.51	32.512	
6,600.0	6,553.1	6,941.0	6,769.6	17.8	18.8	156.22	-348.2	-0.7	875.6	847.4	28.16	31.094	
6,700.0	6,652.3	7,010.6	6,834.9	18.0	19.2	155.34	-356.0	22.1	860.7	831.9	28.82	29.866	
6,800.0	6,751.6	7,112.5	6,931.3	18.3	19.8	154.17	-366.2	53.4	847.6	818.0	29.67	28.564	
6,900.0	6,850.8	7,177.6	6,993.5	18.6	20.1	153.51	-371.6	72.1	836.2	805.9	30.25	27.638	
6,979.0	6,929.1	7,230.7	7,045.0	18.8	20.4	153.11	-375.0	84.7	830.1	799.4	30.67	27.062	
7,000.0	6,950.0	7,244.4	7,058.3	18.9	20.4	169.41	-375.8	87.7	829.1	798.3	30.78	26.935	
7,032.0	6,981.7	7,267.7	7,081.1	19.0	20.5	-170.59	-377.0	92.3	828.5	797.6	30.90	26.811	
7,050.0	6,999.5	7,281.9	7,095.0	19.0	20.6	-162.51	-377.7	95.0	828.7	797.7	30.94	26.781	SF
7,100.0	7,048.4	7,323.2	7,135.6	19.2	20.7	-148.37	-379.4	102.5	830.9	800.0	30.99	26.813	
7,150.0	7,096.4	7,364.4	7,176.1	19.3	20.9	-140.96	-380.9	109.5	835.8	804.9	30.91	27.040	
7,200.0	7,143.1	7,400.7	7,212.0	19.4	21.0	-136.50	-382.2	115.2	843.4	812.7	30.67	27.501	
7,250.0	7,188.2	7,440.4	7,251.2	19.6	21.1	-133.62	-383.3	120.8	853.9	823.6	30.34	28.148	
7,300.0	7,231.4	7,477.3	7,287.8	19.8	21.2	-131.48	-384.3	125.7	867.2	837.3	29.90	29.004	
7,350.0	7,272.2	7,511.7	7,321.9	19.9	21.3	-129.69	-385.2	130.0	883.4	854.0	29.39	30.059	
7,400.0	7,310.4	7,543.4	7,353.5	20.1	21.4	-127.98	-385.8	133.6	902.5	873.7	28.85	31.286	
7,450.0	7,345.8	7,573.5	7,383.5	20.3	21.4	-126.21	-385.8	136.3	924.5	896.1	28.34	32.617	
7,500.0	7,377.9	7,601.0	7,410.8	20.6	21.5	-124.24	-385.7	138.5	949.2	921.3	27.95	33.957	
7,550.0	7,406.7	7,625.6	7,435.4	20.8	21.5	-121.99	-385.6	140.3	976.6	948.9	27.75	35.192	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 5000-Geolink MWD

Offset Well Error: 0.0 ft

Reference 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	-118.65	-357.7	-654.8	746.5				
100.0	100.0	77.0	77.0	0.1	0.1	-118.65	-357.7	-654.8	746.2	745.9	0.26	2,906.107	
200.0	200.0	177.0	177.0	0.3	0.3	-118.65	-357.7	-654.8	746.2	745.6	0.61	1,231.670	CC, ES
300.0	300.0	277.0	277.0	0.5	0.5	151.20	-357.7	-654.8	747.7	746.7	0.96	782.524	
400.0	399.8	376.8	376.8	0.7	0.7	151.34	-357.7	-654.8	752.3	751.0	1.31	575.008	
500.0	499.5	476.5	476.5	0.9	0.8	151.59	-357.7	-654.8	760.0	758.3	1.67	455.897	
553.7	552.8	529.8	529.8	1.0	0.9	151.75	-357.7	-654.8	765.3	763.5	1.86	411.063	
600.0	598.7	575.7	575.7	1.2	1.0	151.95	-357.7	-654.8	770.4	768.4	2.03	379.186	
700.0	698.0	675.0	675.0	1.4	1.2	152.38	-357.7	-654.8	781.3	778.9	2.40	325.622	
800.0	797.2	774.2	774.2	1.7	1.4	152.79	-357.7	-654.8	792.2	789.5	2.77	286.271	
900.0	896.5	873.5	873.5	2.0	1.5	153.19	-357.7	-654.8	803.2	800.1	3.14	256.188	
1,000.0	995.7	972.7	972.7	2.2	1.7	153.58	-357.7	-654.8	814.3	810.8	3.50	232.467	
1,100.0	1,094.9	1,071.9	1,071.9	2.5	1.9	153.96	-357.7	-654.8	825.3	821.5	3.87	213.294	
1,200.0	1,194.2	1,171.2	1,171.2	2.8	2.0	154.33	-357.7	-654.8	836.4	832.2	4.24	197.484	
1,300.0	1,293.4	1,270.4	1,270.4	3.1	2.2	154.69	-357.7	-654.8	847.6	843.0	4.60	184.226	
1,400.0	1,392.7	1,369.7	1,369.7	3.3	2.4	155.04	-357.7	-654.8	858.7	853.8	4.97	172.953	
1,500.0	1,491.9	1,468.9	1,468.9	3.6	2.6	155.38	-357.7	-654.8	869.9	864.6	5.33	163.251	
1,600.0	1,591.1	1,568.1	1,568.1	3.9	2.7	155.72	-357.7	-654.8	881.1	875.4	5.69	154.814	
1,700.0	1,690.4	1,667.4	1,667.4	4.2	2.9	156.04	-357.7	-654.8	892.4	886.3	6.05	147.412	
1,800.0	1,789.6	1,766.6	1,766.6	4.4	3.1	156.36	-357.7	-654.8	903.7	897.3	6.42	140.865	
1,900.0	1,888.9	1,865.9	1,865.9	4.7	3.3	156.67	-357.7	-654.8	915.0	908.2	6.78	135.035	
2,000.0	1,988.1	1,965.1	1,965.1	5.0	3.4	156.97	-357.7	-654.8	926.3	919.2	7.14	129.809	
2,100.0	2,087.3	2,064.3	2,064.3	5.3	3.6	157.26	-357.7	-654.8	937.7	930.2	7.50	125.100	
2,200.0	2,186.6	2,163.6	2,163.6	5.5	3.8	157.55	-357.7	-654.8	949.1	941.2	7.85	120.834	
2,300.0	2,285.8	2,262.8	2,262.8	5.8	3.9	157.83	-357.7	-654.8	960.5	952.3	8.21	116.952	
2,400.0	2,385.0	2,362.0	2,362.0	6.1	4.1	158.10	-357.7	-654.8	971.9	963.3	8.57	113.405	
2,500.0	2,484.3	2,461.3	2,461.3	6.4	4.3	158.37	-357.7	-654.8	983.3	974.4	8.93	110.150	
2,600.0	2,583.5	2,560.5	2,560.5	6.7	4.5	158.63	-357.7	-654.8	994.8	985.5	9.28	107.155	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 5050-Geolink MWD — **Offset Well Error:** 0.0 ft

Reference 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	136.97	-158.5	147.9	217.7				
100.0	100.0	80.0	80.0	0.1	0.1	136.97	-158.5	147.9	216.8	216.5	0.26	827.344	
200.0	200.0	180.0	180.0	0.3	0.3	136.97	-158.5	147.9	216.8	216.1	0.61	354.731	
300.0	300.0	280.0	280.0	0.5	0.5	47.12	-158.5	147.9	215.6	214.6	0.96	224.076	
400.0	399.8	379.8	379.8	0.7	0.7	48.21	-158.5	147.9	212.0	210.7	1.32	160.345	
500.0	499.5	479.5	479.5	0.9	0.8	50.09	-158.5	147.9	206.3	204.6	1.70	121.207	
553.7	552.8	532.8	532.8	1.0	0.9	51.48	-158.5	147.9	202.4	200.5	1.92	105.633	
600.0	598.7	578.7	578.7	1.2	1.0	52.76	-158.5	147.9	198.9	196.8	2.11	94.479	
700.0	698.0	678.0	678.0	1.4	1.2	55.67	-158.5	147.9	191.7	189.2	2.52	75.945	
800.0	797.2	777.2	777.2	1.7	1.4	58.81	-158.5	147.9	185.0	182.0	2.96	62.600	
900.0	896.5	876.5	876.5	2.0	1.5	62.16	-158.5	147.9	178.9	175.5	3.40	52.656	
1,000.0	995.7	975.7	975.7	2.2	1.7	65.74	-158.5	147.9	173.4	169.6	3.85	45.060	
1,100.0	1,094.9	1,074.9	1,074.9	2.5	1.9	69.53	-158.5	147.9	168.7	164.4	4.31	39.157	
1,200.0	1,194.2	1,174.2	1,174.2	2.8	2.0	73.52	-158.5	147.9	164.8	160.0	4.77	34.518	
1,300.0	1,293.4	1,273.4	1,273.4	3.1	2.2	77.67	-158.5	147.9	161.7	156.5	5.24	30.849	
1,400.0	1,392.7	1,372.7	1,372.7	3.3	2.4	81.97	-158.5	147.9	159.5	153.8	5.71	27.943	
1,500.0	1,491.9	1,471.9	1,471.9	3.6	2.6	86.35	-158.5	147.9	158.2	152.1	6.17	25.647	
1,582.3	1,573.6	1,553.6	1,553.6	3.8	2.7	90.00	-158.5	147.9	157.9	151.4	6.54	24.132	CC
1,600.0	1,591.1	1,571.1	1,571.1	3.9	2.7	90.78	-158.5	147.9	157.9	151.3	6.62	23.845	ES
1,700.0	1,690.4	1,670.4	1,670.4	4.2	2.9	95.20	-158.5	147.9	158.6	151.5	7.06	22.448	
1,800.0	1,789.6	1,769.6	1,769.6	4.4	3.1	99.56	-158.5	147.9	160.2	152.7	7.49	21.381	
1,900.0	1,888.9	1,868.9	1,868.9	4.7	3.3	103.81	-158.5	147.9	162.7	154.8	7.90	20.588	
2,000.0	1,988.1	1,968.1	1,968.1	5.0	3.4	107.91	-158.5	147.9	166.1	157.8	8.30	20.017	
2,100.0	2,087.3	2,067.3	2,067.3	5.3	3.6	111.83	-158.5	147.9	170.3	161.6	8.68	19.629	
2,200.0	2,186.6	2,166.6	2,166.6	5.5	3.8	115.55	-158.5	147.9	175.3	166.2	9.04	19.390	
2,300.0	2,285.8	2,265.8	2,265.8	5.8	4.0	119.05	-158.5	147.9	181.0	171.6	9.39	19.271	
2,400.0	2,385.0	2,365.0	2,365.0	6.1	4.1	122.33	-158.5	147.9	187.3	177.6	9.73	19.247	SF
2,500.0	2,484.3	2,464.3	2,464.3	6.4	4.3	125.38	-158.5	147.9	194.2	184.1	10.06	19.300	
2,600.0	2,583.5	2,563.5	2,563.5	6.7	4.5	128.23	-158.5	147.9	201.6	191.2	10.39	19.413	
2,700.0	2,682.8	2,662.8	2,662.8	6.9	4.6	130.86	-158.5	147.9	209.5	198.8	10.70	19.572	
2,800.0	2,782.0	2,762.0	2,762.0	7.2	4.8	133.30	-158.5	147.9	217.8	206.8	11.02	19.766	
2,900.0	2,881.2	2,861.2	2,861.2	7.5	5.0	135.56	-158.5	147.9	226.4	215.1	11.33	19.986	
3,000.0	2,980.5	2,960.5	2,960.5	7.8	5.2	137.65	-158.5	147.9	235.4	223.8	11.64	20.226	
3,100.0	3,079.7	3,059.7	3,059.7	8.0	5.3	139.59	-158.5	147.9	244.7	232.7	11.95	20.479	
3,200.0	3,179.0	3,159.0	3,159.0	8.3	5.5	141.38	-158.5	147.9	254.2	242.0	12.26	20.741	
3,300.0	3,278.2	3,258.2	3,258.2	8.6	5.7	143.05	-158.5	147.9	264.0	251.4	12.57	21.008	
3,400.0	3,377.4	3,357.4	3,357.4	8.9	5.9	144.59	-158.5	147.9	273.9	261.1	12.88	21.277	
3,500.0	3,476.7	3,456.7	3,456.7	9.2	6.0	146.03	-158.5	147.9	284.1	270.9	13.19	21.546	
3,600.0	3,575.9	3,555.9	3,555.9	9.4	6.2	147.37	-158.5	147.9	294.4	280.9	13.50	21.813	
3,700.0	3,675.2	3,655.2	3,655.2	9.7	6.4	148.61	-158.5	147.9	304.9	291.1	13.81	22.077	
3,800.0	3,774.4	3,754.4	3,754.4	10.0	6.6	149.77	-158.5	147.9	315.5	301.4	14.12	22.337	
3,900.0	3,873.6	3,853.6	3,853.6	10.3	6.7	150.86	-158.5	147.9	326.2	311.8	14.44	22.592	
4,000.0	3,972.9	3,952.9	3,952.9	10.5	6.9	151.88	-158.5	147.9	337.0	322.3	14.76	22.841	
4,100.0	4,072.1	4,052.1	4,052.1	10.8	7.1	152.83	-158.5	147.9	348.0	332.9	15.07	23.084	
4,200.0	4,171.3	4,151.3	4,151.3	11.1	7.2	153.73	-158.5	147.9	359.0	343.6	15.39	23.322	
4,300.0	4,270.6	4,250.6	4,250.6	11.4	7.4	154.57	-158.5	147.9	370.1	354.4	15.71	23.553	
4,400.0	4,369.8	4,349.8	4,349.8	11.7	7.6	155.37	-158.5	147.9	381.3	365.2	16.03	23.777	
4,500.0	4,469.1	4,449.1	4,449.1	11.9	7.8	156.11	-158.5	147.9	392.5	376.1	16.36	23.995	
4,600.0	4,568.3	4,548.3	4,548.3	12.2	7.9	156.82	-158.5	147.9	403.8	387.1	16.68	24.207	
4,700.0	4,667.5	4,647.5	4,647.5	12.5	8.1	157.49	-158.5	147.9	415.2	398.2	17.01	24.413	
4,800.0	4,766.8	4,746.8	4,746.8	12.8	8.3	158.12	-158.5	147.9	426.6	409.2	17.33	24.612	
4,900.0	4,866.0	4,846.0	4,846.0	13.0	8.5	158.72	-158.5	147.9	438.0	420.4	17.66	24.806	

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 Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 5050-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,965.3	4,945.3	4,945.3	13.3	8.6	159.29	-158.5	147.9	449.6	431.6	17.99	24.994	
5,100.0	5,064.5	5,044.5	5,044.5	13.6	8.8	159.83	-158.5	147.9	461.1	442.8	18.32	25.176	
5,200.0	5,163.7	5,050.0	5,050.0	13.9	8.8	159.86	-158.5	147.9	481.9	463.4	18.51	26.030	
5,300.0	5,263.0	5,050.0	5,050.0	14.2	8.8	159.86	-158.5	147.9	521.3	502.6	18.70	27.875	
5,400.0	5,362.2	5,050.0	5,050.0	14.4	8.8	159.86	-158.5	147.9	575.7	556.8	18.89	30.469	
5,500.0	5,461.4	5,050.0	5,050.0	14.7	8.8	159.86	-158.5	147.9	641.1	622.0	19.08	33.593	
5,600.0	5,560.7	5,050.0	5,050.0	15.0	8.8	159.86	-158.5	147.9	714.5	695.2	19.27	37.074	
5,700.0	5,659.9	5,050.0	5,050.0	15.3	8.8	159.86	-158.5	147.9	793.8	774.3	19.46	40.785	
5,800.0	5,759.2	5,050.0	5,050.0	15.5	8.8	159.86	-158.5	147.9	877.3	857.7	19.65	44.641	
5,900.0	5,858.4	5,050.0	5,050.0	15.8	8.8	159.86	-158.5	147.9	964.0	944.1	19.84	48.581	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - STANLEY 2 (EXISTING) - GERRITY OIL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 5175-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
3,000.0	2,980.5	3,008.5	3,008.5	7.8	5.3	17.72	-304.1	1,266.6	991.0	980.3	10.71	92.555	
3,100.0	3,079.7	3,107.7	3,107.7	8.0	5.4	17.94	-304.1	1,266.6	979.3	968.2	11.07	88.434	
3,200.0	3,179.0	3,207.0	3,207.0	8.3	5.6	18.16	-304.1	1,266.6	967.5	956.1	11.44	84.572	
3,300.0	3,278.2	3,306.2	3,306.2	8.6	5.8	18.39	-304.1	1,266.6	955.8	944.0	11.81	80.946	
3,400.0	3,377.4	3,405.4	3,405.4	8.9	5.9	18.63	-304.1	1,266.6	944.2	932.0	12.18	77.535	
3,500.0	3,476.7	3,504.7	3,504.7	9.2	6.1	18.87	-304.1	1,266.6	932.5	919.9	12.55	74.319	
3,600.0	3,575.9	3,603.9	3,603.9	9.4	6.3	19.12	-304.1	1,266.6	920.8	907.9	12.92	71.284	
3,700.0	3,675.2	3,703.2	3,703.2	9.7	6.5	19.37	-304.1	1,266.6	909.2	895.9	13.29	68.414	
3,800.0	3,774.4	3,802.4	3,802.4	10.0	6.6	19.63	-304.1	1,266.6	897.6	883.9	13.66	65.697	
3,900.0	3,873.6	3,901.6	3,901.6	10.3	6.8	19.90	-304.1	1,266.6	886.0	871.9	14.04	63.120	
4,000.0	3,972.9	4,000.9	4,000.9	10.5	7.0	20.17	-304.1	1,266.6	874.4	860.0	14.41	60.673	
4,100.0	4,072.1	4,100.1	4,100.1	10.8	7.2	20.46	-304.1	1,266.6	862.8	848.0	14.79	58.346	
4,200.0	4,171.3	4,199.3	4,199.3	11.1	7.3	20.74	-304.1	1,266.6	851.3	836.1	15.17	56.132	
4,300.0	4,270.6	4,298.6	4,298.6	11.4	7.5	21.04	-304.1	1,266.6	839.8	824.2	15.55	54.022	
4,400.0	4,369.8	4,397.8	4,397.8	11.7	7.7	21.35	-304.1	1,266.6	828.3	812.4	15.93	52.009	
4,500.0	4,469.1	4,497.1	4,497.1	11.9	7.8	21.66	-304.1	1,266.6	816.8	800.5	16.31	50.087	
4,600.0	4,568.3	4,596.3	4,596.3	12.2	8.0	21.99	-304.1	1,266.6	805.4	788.7	16.69	48.249	
4,700.0	4,667.5	4,695.5	4,695.5	12.5	8.2	22.32	-304.1	1,266.6	793.9	776.9	17.08	46.491	
4,800.0	4,766.8	4,794.8	4,794.8	12.8	8.4	22.66	-304.1	1,266.6	782.6	765.1	17.46	44.808	
4,900.0	4,866.0	4,894.0	4,894.0	13.0	8.5	23.01	-304.1	1,266.6	771.2	753.3	17.85	43.194	
5,000.0	4,965.3	4,993.3	4,993.3	13.3	8.7	23.37	-304.1	1,266.6	759.9	741.6	18.25	41.647	
5,100.0	5,064.5	5,092.5	5,092.5	13.6	8.9	23.75	-304.1	1,266.6	748.6	729.9	18.64	40.161	
5,200.0	5,163.7	5,175.0	5,175.0	13.9	9.0	24.07	-304.1	1,266.6	737.5	718.5	19.00	38.813	
5,266.4	5,229.6	5,175.0	5,175.0	14.1	9.0	24.07	-304.1	1,266.6	734.5	715.4	19.13	38.393	CC, ES
5,300.0	5,263.0	5,175.0	5,175.0	14.2	9.0	24.07	-304.1	1,266.6	735.3	716.1	19.20	38.302	SF
5,400.0	5,362.2	5,175.0	5,175.0	14.4	9.0	24.07	-304.1	1,266.6	746.5	727.1	19.39	38.497	
5,500.0	5,461.4	5,175.0	5,175.0	14.7	9.0	24.07	-304.1	1,266.6	770.7	751.2	19.59	39.348	
5,600.0	5,560.7	5,175.0	5,175.0	15.0	9.0	24.07	-304.1	1,266.6	806.7	786.9	19.78	40.776	
5,700.0	5,659.9	5,175.0	5,175.0	15.3	9.0	24.07	-304.1	1,266.6	852.9	833.0	19.98	42.691	
5,800.0	5,759.2	5,175.0	5,175.0	15.5	9.0	24.07	-304.1	1,266.6	907.9	887.7	20.18	44.999	
5,900.0	5,858.4	5,175.0	5,175.0	15.8	9.0	24.07	-304.1	1,266.6	970.0	949.7	20.37	47.618	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Bighorn 4L-17H-P267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	**MD Reference:**	WELL @ 4983.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Bighorn 4L-17H-P267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	DD	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4983.0ft	Coordinates are relative to: Bighorn 4L-17H-P267
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: 0.38°