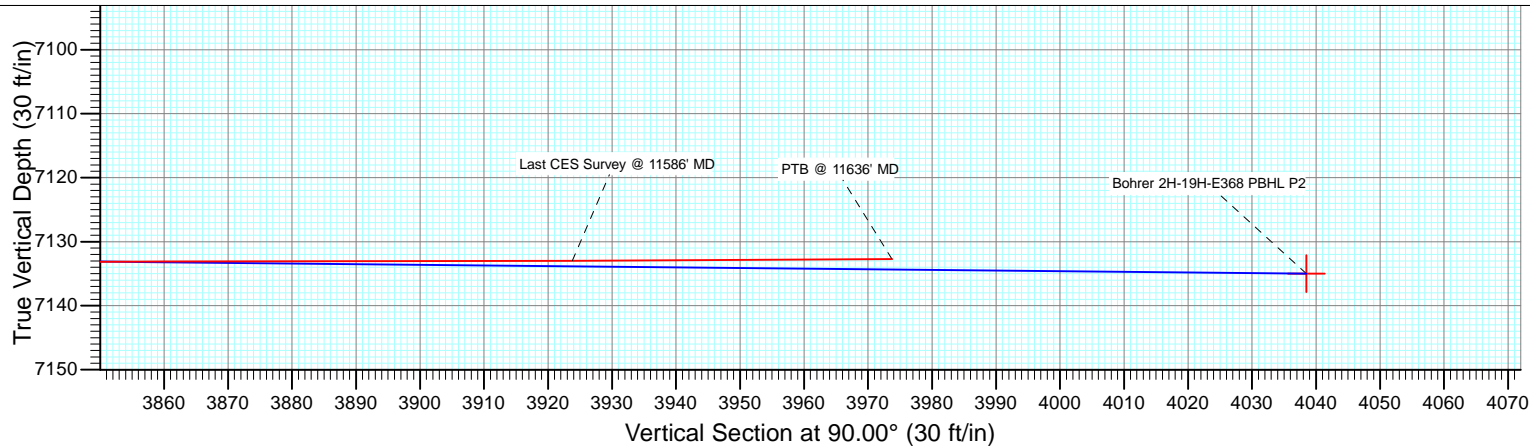
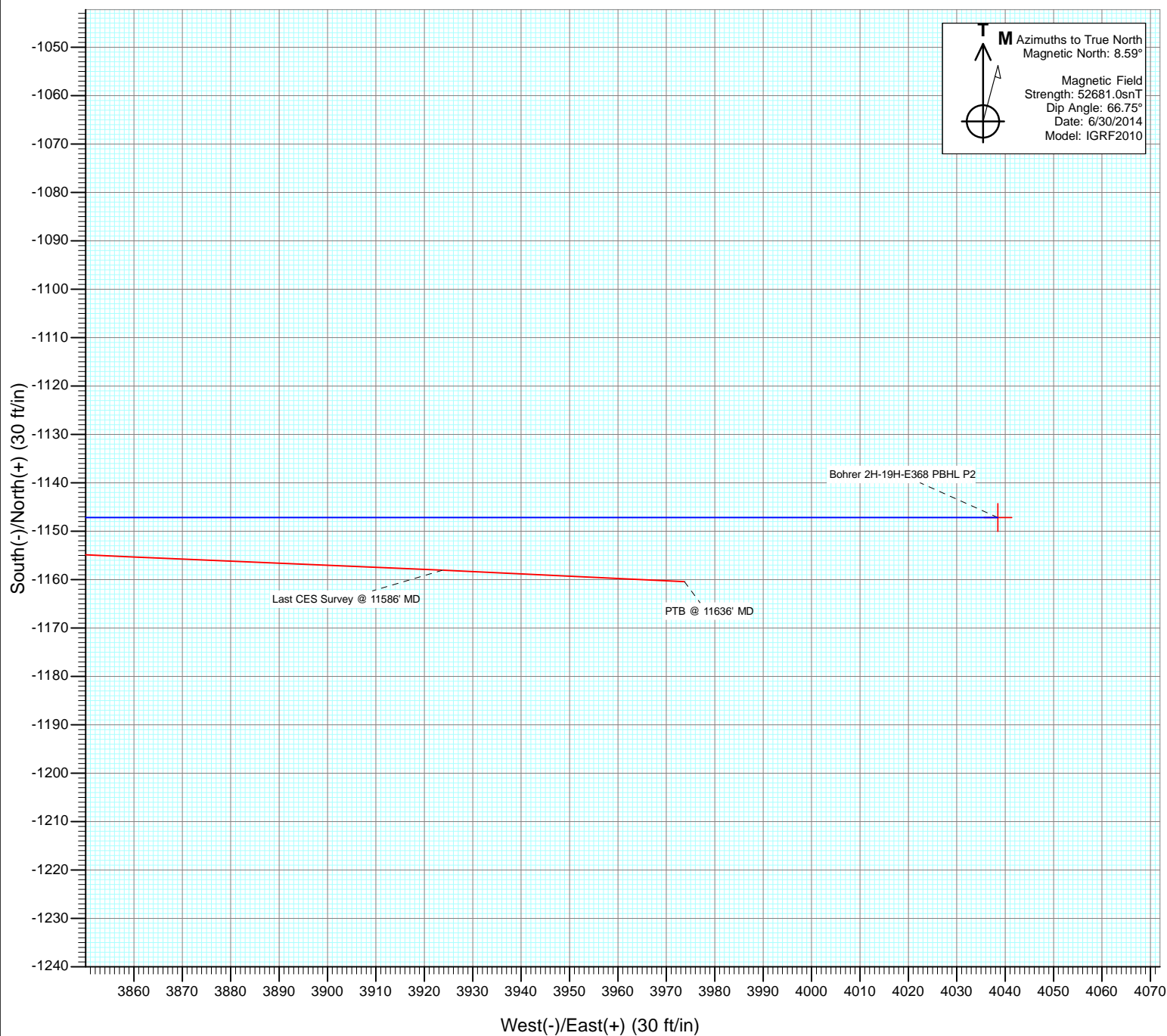




Project: DJ Wattenberg
Site: S19-T3N-R68W (Bohrer/Boyd)
Well: Bohrer 2H-19H-E368
Wellbore: Hz
Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2H-19H-E368
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5090.0ft (Patterson 326)
Site:	S19-T3N-R68W (Bohrer/Boyd)	MD Reference:	32' KB @ 5090.0ft (Patterson 326)
Well:	Bohrer 2H-19H-E368	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

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		S19-T3N-R68W (Bohrer/Boyd)			
Site Position:		Northing:	1,318,413.13 ft	Latitude:	40.206570
From:	Lat/Long	Easting:	3,124,860.64 ft	Longitude:	-105.052980
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.29 °

Well	Bohrer 2H-19H-E368					
Well Position	+N/-S	0.0 ft	Northing:	1,321,226.11 ft	Latitude:	40.214290
	+E/-W	0.0 ft	Easting:	3,124,994.48 ft	Longitude:	-105.052450
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,058.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/30/2014	8.59	66.75	52,681

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	90.00	

Survey Program	Date	7/7/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
145.0	11,636.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
145.0	0.80	65.80	145.0	0.4	0.9	0.9	0.55	0.55		
239.0	0.30	202.40	239.0	0.5	1.4	1.4	1.10	-0.53		
334.0	1.40	213.50	334.0	-0.7	0.7	0.7	1.17	1.16		
428.0	2.10	226.30	427.9	-2.9	-1.2	-1.2	0.85	0.74		
523.0	3.40	233.70	522.8	-5.8	-4.7	-4.7	1.42	1.37		
617.0	5.00	232.30	616.6	-9.9	-10.2	-10.2	1.71	1.70		
712.0	6.40	219.30	711.1	-16.5	-16.8	-16.8	2.00	1.47		
806.0	5.00	213.20	804.6	-24.0	-22.4	-22.4	1.62	-1.49		
820.0	4.90	209.50	818.6	-25.1	-23.0	-23.0	2.39	-0.71		
930.0	6.40	214.20	928.0	-34.2	-28.8	-28.8	1.43	1.36		
1,025.0	7.80	214.70	1,022.3	-43.9	-35.4	-35.4	1.48	1.47		
1,120.0	9.10	217.10	1,116.3	-55.2	-43.6	-43.6	1.42	1.37		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2H-19H-E368
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5090.0ft (Patterson 326)
Site:	S19-T3N-R68W (Bohrer/Boyd)	MD Reference:	32' KB @ 5090.0ft (Patterson 326)
Well:	Bohrer 2H-19H-E368	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
1,215.0	10.90	216.70	1,209.8	-68.4	-53.5	-53.5	1.90	1.89	
1,310.0	10.00	211.20	1,303.3	-82.6	-63.2	-63.2	1.41	-0.95	
1,404.0	10.50	214.10	1,395.8	-96.7	-72.2	-72.2	0.76	0.53	
1,496.0	10.50	213.30	1,486.2	-110.7	-81.5	-81.5	0.16	0.00	
1,589.0	9.80	209.30	1,577.8	-124.6	-90.0	-90.0	1.07	-0.75	
1,681.0	10.40	210.70	1,668.3	-138.6	-98.1	-98.1	0.70	0.65	
1,773.0	11.20	217.80	1,758.7	-152.8	-107.8	-107.8	1.69	0.87	
1,865.0	12.30	216.20	1,848.8	-167.8	-119.1	-119.1	1.25	1.20	
1,957.0	13.10	216.10	1,938.5	-184.1	-131.0	-131.0	0.87	0.87	
2,049.0	13.10	212.90	2,028.1	-201.3	-142.8	-142.8	0.79	0.00	
2,141.0	13.90	215.90	2,117.6	-219.0	-155.0	-155.0	1.16	0.87	
2,232.0	13.10	212.10	2,206.1	-236.6	-166.9	-166.9	1.31	-0.88	
2,324.0	13.20	215.50	2,295.7	-254.0	-178.5	-178.5	0.85	0.11	
2,416.0	12.40	212.50	2,385.4	-270.9	-189.9	-189.9	1.13	-0.87	
2,509.0	12.40	219.00	2,476.2	-287.0	-201.5	-201.5	1.50	0.00	
2,601.0	10.60	213.80	2,566.4	-301.8	-212.5	-212.5	2.26	-1.96	
2,692.0	11.50	222.70	2,655.7	-315.4	-223.3	-223.3	2.12	0.99	
2,785.0	12.10	218.40	2,746.7	-329.8	-235.6	-235.6	1.14	0.65	
2,879.0	12.70	213.20	2,838.5	-346.2	-247.4	-247.4	1.35	0.64	
2,974.0	14.10	215.70	2,931.0	-364.3	-259.9	-259.9	1.59	1.47	
3,069.0	13.50	226.10	3,023.2	-381.4	-274.6	-274.6	2.68	-0.63	
3,164.0	13.90	227.90	3,115.5	-396.8	-291.1	-291.1	0.62	0.42	
3,259.0	11.60	225.40	3,208.2	-411.1	-306.3	-306.3	2.49	-2.42	
3,354.0	13.80	220.70	3,300.9	-426.4	-320.5	-320.5	2.56	2.32	
3,449.0	14.70	215.50	3,392.9	-444.8	-334.9	-334.9	1.65	0.95	
3,544.0	16.10	215.80	3,484.5	-465.3	-349.6	-349.6	1.48	1.47	
3,639.0	14.20	214.40	3,576.2	-485.6	-363.9	-363.9	2.04	-2.00	
3,734.0	14.50	216.10	3,668.2	-504.8	-377.5	-377.5	0.54	0.32	
3,828.0	14.80	215.30	3,759.2	-524.1	-391.4	-391.4	0.38	0.32	
3,922.0	14.00	214.30	3,850.2	-543.3	-404.7	-404.7	0.89	-0.85	
4,017.0	13.40	215.10	3,942.5	-561.8	-417.5	-417.5	0.66	-0.63	
4,112.0	14.00	210.80	4,034.8	-580.7	-429.7	-429.7	1.24	0.63	
4,207.0	11.90	211.80	4,127.4	-598.9	-440.8	-440.8	2.22	-2.21	
4,302.0	10.90	213.80	4,220.5	-614.7	-451.0	-451.0	1.13	-1.05	
4,397.0	12.40	215.40	4,313.6	-630.5	-461.9	-461.9	1.62	1.58	
4,492.0	11.50	215.20	4,406.5	-646.5	-473.2	-473.2	0.95	-0.95	
4,587.0	12.10	212.70	4,499.5	-662.7	-484.1	-484.1	0.83	0.63	
4,682.0	8.70	215.90	4,592.9	-676.9	-493.7	-493.7	3.63	-3.58	
4,777.0	9.50	211.80	4,686.7	-689.3	-502.0	-502.0	1.08	0.84	
4,871.0	10.90	209.30	4,779.3	-703.7	-510.4	-510.4	1.56	1.49	
4,965.0	11.80	214.10	4,871.4	-719.4	-520.2	-520.2	1.39	0.96	
5,061.0	13.10	213.30	4,965.2	-736.6	-531.7	-531.7	1.37	1.35	
5,156.0	13.50	213.40	5,057.6	-754.9	-543.7	-543.7	0.42	0.42	
5,250.0	12.60	215.40	5,149.2	-772.4	-555.7	-555.7	1.07	-0.96	
5,345.0	14.50	215.70	5,241.5	-790.5	-568.6	-568.6	2.00	2.00	
5,440.0	13.90	213.70	5,333.6	-809.6	-581.9	-581.9	0.82	-0.63	
5,534.0	15.70	213.50	5,424.5	-829.6	-595.2	-595.2	1.92	1.91	
5,629.0	15.70	214.60	5,516.0	-850.9	-609.5	-609.5	0.31	0.00	
5,724.0	13.70	218.50	5,607.9	-870.3	-623.8	-623.8	2.35	-2.11	
5,818.0	12.80	215.30	5,699.4	-887.5	-636.8	-636.8	1.23	-0.96	
5,913.0	13.80	218.50	5,791.8	-905.0	-649.9	-649.9	1.31	1.05	
6,008.0	13.00	217.20	5,884.2	-922.4	-663.4	-663.4	0.90	-0.84	
6,103.0	11.40	222.60	5,977.1	-937.8	-676.3	-676.3	2.07	-1.68	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2H-19H-E368
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5090.0ft (Patterson 326)
Site:	S19-T3N-R68W (Bohrer/Boyd)	MD Reference:	32' KB @ 5090.0ft (Patterson 326)
Well:	Bohrer 2H-19H-E368	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
6,197.0	11.80	219.10	6,069.2	-952.1	-688.6	-688.6	0.86	0.43	
6,292.0	12.20	214.40	6,162.1	-967.9	-700.4	-700.4	1.11	0.42	
6,387.0	8.70	213.60	6,255.5	-982.2	-710.1	-710.1	3.69	-3.68	
6,434.0	7.60	211.30	6,302.0	-987.8	-713.6	-713.6	2.44	-2.34	
6,482.0	7.30	187.80	6,349.6	-993.5	-715.7	-715.7	6.33	-0.62	
6,529.0	7.90	162.60	6,396.2	-999.6	-715.1	-715.1	7.14	1.28	
6,576.0	8.70	133.80	6,442.8	-1,005.1	-711.6	-711.6	8.91	1.70	
6,623.0	10.90	103.90	6,489.1	-1,008.7	-704.7	-704.7	11.63	4.68	
6,671.0	12.70	95.60	6,536.1	-1,010.3	-695.1	-695.1	5.15	3.75	
6,718.0	14.60	95.20	6,581.8	-1,011.3	-684.0	-684.0	4.05	4.04	
6,765.0	16.30	98.60	6,627.1	-1,012.8	-671.6	-671.6	4.10	3.62	
6,812.0	18.40	102.00	6,671.9	-1,015.4	-657.8	-657.8	4.96	4.47	
6,860.0	20.50	102.30	6,717.2	-1,018.7	-642.2	-642.2	4.38	4.37	
6,907.0	23.00	100.40	6,760.8	-1,022.1	-625.1	-625.1	5.53	5.32	
6,955.0	28.70	99.40	6,804.0	-1,025.7	-604.5	-604.5	11.91	11.87	
7,002.0	36.70	101.20	6,843.5	-1,030.3	-579.6	-579.6	17.14	17.02	
7,050.0	43.10	102.90	6,880.3	-1,036.7	-549.5	-549.5	13.52	13.33	
7,097.0	48.50	103.50	6,913.1	-1,044.4	-516.7	-516.7	11.53	11.49	
7,144.0	53.50	103.90	6,942.7	-1,053.1	-481.2	-481.2	10.66	10.64	
7,191.0	57.60	102.80	6,969.2	-1,062.0	-443.5	-443.5	8.93	8.72	
7,239.0	59.60	102.30	6,994.2	-1,070.9	-403.5	-403.5	4.26	4.17	
7,286.0	62.10	101.80	7,017.1	-1,079.5	-363.4	-363.4	5.40	5.32	
7,334.0	67.60	101.10	7,037.5	-1,088.1	-320.8	-320.8	11.53	11.46	
7,381.0	76.70	98.80	7,051.9	-1,095.8	-276.8	-276.8	19.91	19.36	
7,429.0	85.30	95.30	7,059.4	-1,101.6	-229.8	-229.8	19.31	17.92	
7,476.0	88.50	93.90	7,062.0	-1,105.4	-183.0	-183.0	7.43	6.81	
7,500.0	89.00	93.80	7,062.5	-1,107.0	-159.1	-159.1	2.12	2.08	
7,547.0	90.10	93.90	7,062.9	-1,110.1	-112.2	-112.2	2.35	2.34	
7,550.0	90.01	93.92	7,062.9	-1,110.3	-109.2	-109.2	3.07	-3.00	
7,642.0	87.30	94.60	7,065.0	-1,117.2	-17.5	-17.5	3.04	-2.95	
7,737.0	87.50	94.60	7,069.3	-1,124.8	77.1	77.1	0.21	0.21	
7,832.0	87.70	92.80	7,073.3	-1,130.9	171.8	171.8	1.90	0.21	
7,927.0	88.30	92.90	7,076.6	-1,135.6	266.7	266.7	0.64	0.63	
8,022.0	88.00	92.10	7,079.7	-1,139.8	361.5	361.5	0.90	-0.32	
8,116.0	88.00	92.40	7,083.0	-1,143.5	455.4	455.4	0.32	0.00	
8,211.0	88.70	93.50	7,085.7	-1,148.4	550.2	550.2	1.37	0.74	
8,306.0	89.00	91.20	7,087.6	-1,152.2	645.1	645.1	2.44	0.32	
8,401.0	88.30	90.60	7,089.8	-1,153.7	740.1	740.1	0.97	-0.74	
8,496.0	88.10	89.80	7,092.8	-1,154.1	835.0	835.0	0.87	-0.21	
8,591.0	89.80	91.60	7,094.6	-1,155.2	930.0	930.0	2.61	1.79	
8,686.0	90.60	90.30	7,094.2	-1,156.8	1,025.0	1,025.0	1.61	0.84	
8,781.0	91.10	89.80	7,092.8	-1,156.9	1,120.0	1,120.0	0.74	0.53	
8,875.0	89.10	89.30	7,092.7	-1,156.2	1,214.0	1,214.0	2.19	-2.13	
8,970.0	87.80	88.00	7,095.2	-1,153.9	1,308.9	1,308.9	1.93	-1.37	
9,064.0	88.30	88.10	7,098.4	-1,150.7	1,402.8	1,402.8	0.54	0.53	
9,159.0	88.00	87.60	7,101.5	-1,147.2	1,497.7	1,497.7	0.61	-0.32	
9,254.0	88.80	89.50	7,104.2	-1,144.8	1,592.6	1,592.6	2.17	0.84	
9,349.0	88.90	89.50	7,106.1	-1,143.9	1,687.6	1,687.6	0.11	0.11	
9,444.0	89.00	89.40	7,107.8	-1,143.0	1,782.6	1,782.6	0.15	0.11	
9,538.0	88.70	90.40	7,109.7	-1,142.8	1,876.5	1,876.5	1.11	-0.32	
9,633.0	89.50	90.10	7,111.2	-1,143.3	1,971.5	1,971.5	0.90	0.84	
9,728.0	90.10	90.30	7,111.5	-1,143.6	2,066.5	2,066.5	0.67	0.63	
9,823.0	88.80	91.00	7,112.4	-1,144.7	2,161.5	2,161.5	1.55	-1.37	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2H-19H-E368
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5090.0ft (Patterson 326)
Site:	S19-T3N-R68W (Bohrer/Boyd)	MD Reference:	32' KB @ 5090.0ft (Patterson 326)
Well:	Bohrer 2H-19H-E368	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
9,918.0	89.30	90.90	7,114.0	-1,146.2	2,256.5	2,256.5	0.54	0.53	
10,012.0	90.10	91.80	7,114.5	-1,148.5	2,350.5	2,350.5	1.28	0.85	
10,106.0	89.70	91.90	7,114.7	-1,151.5	2,444.4	2,444.4	0.44	-0.43	
10,200.0	89.40	90.30	7,115.4	-1,153.3	2,538.4	2,538.4	1.73	-0.32	
10,295.0	88.40	88.90	7,117.2	-1,152.6	2,633.4	2,633.4	1.81	-1.05	
10,389.0	88.70	89.10	7,119.6	-1,151.0	2,727.3	2,727.3	0.38	0.32	
10,484.0	88.90	89.70	7,121.6	-1,150.0	2,822.3	2,822.3	0.67	0.21	
10,578.0	89.20	89.70	7,123.1	-1,149.5	2,916.3	2,916.3	0.32	0.32	
10,673.0	89.60	89.20	7,124.1	-1,148.6	3,011.3	3,011.3	0.67	0.42	
10,767.0	90.20	88.40	7,124.3	-1,146.6	3,105.2	3,105.2	1.06	0.64	
10,862.0	89.50	89.00	7,124.5	-1,144.5	3,200.2	3,200.2	0.97	-0.74	
10,956.0	89.70	88.90	7,125.2	-1,142.8	3,294.2	3,294.2	0.24	0.21	
11,051.0	89.80	90.70	7,125.6	-1,142.4	3,389.2	3,389.2	1.90	0.11	
11,145.0	87.80	90.00	7,127.6	-1,143.0	3,483.2	3,483.2	2.25	-2.13	
11,240.0	88.80	91.90	7,130.4	-1,144.6	3,578.1	3,578.1	2.26	1.05	
11,333.0	88.80	91.80	7,132.4	-1,147.6	3,671.0	3,671.0	0.11	0.00	
11,427.0	90.20	92.70	7,133.2	-1,151.3	3,765.0	3,765.0	1.77	1.49	
11,522.0	89.90	92.20	7,133.1	-1,155.3	3,859.9	3,859.9	0.61	-0.32	
11,586.0	90.30	92.70	7,133.0	-1,158.1	3,923.8	3,923.8	1.00	0.62	Last CES Survey @ 11586' MD
11,636.0	90.30	92.70	7,132.7	-1,160.4	3,973.7	3,973.7	0.00	0.00	PTB @ 11636' MD

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2H-19H-E368
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5090.0ft (Patterson 326)
Site:	S19-T3N-R68W (Bohrer/Boyd)	MD Reference:	32' KB @ 5090.0ft (Patterson 326)
Well:	Bohrer 2H-19H-E368	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Bohrer 2H-19H-E368 86	0.00	0.00	7,090.0	-1,147.2	875.5	1,320,083.40	3,125,875.78	40.211141	-105.049315
- actual wellpath misses target center by 8.1ft at 8536.4ft MD (7093.9 TVD, -1154.2 N, 875.4 E)									
- Point									
Bohrer 2H-19H-E368 10	0.00	0.00	7,125.0	-1,147.2	3,042.5	1,320,094.33	3,128,042.75	40.211140	-105.041556
- actual wellpath misses target center by 1.2ft at 10704.3ft MD (7124.3 TVD, -1148.1 N, 3042.5 E)									
- Point									
Bohrer 2H-19H-E368 PE	0.00	0.00	7,135.0	-1,147.2	4,038.5	1,320,099.36	3,129,038.70	40.211140	-105.037990
- actual wellpath misses target center by 66.1ft at 11636.0ft MD (7132.7 TVD, -1160.4 N, 3973.7 E)									
- Point									
Bohrer 2H-19H-E368 97	0.00	0.00	7,115.0	-1,147.2	1,975.5	1,320,088.95	3,126,975.77	40.211141	-105.045377
- actual wellpath misses target center by 5.4ft at 9637.0ft MD (7111.2 TVD, -1143.3 N, 1975.6 E)									
- Point									
Bohrer 2H-19H-E368 LP	0.00	0.00	7,085.0	-1,147.2	-171.5	1,320,078.11	3,124,828.76	40.211141	-105.053064
- actual wellpath misses target center by 46.8ft at 7490.8ft MD (7062.3 TVD, -1106.4 N, -168.3 E)									
- Point									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	Comment	
11,586.0	7,133.0	-1,158.1	3,923.8	Last CES Survey @ 11586' MD	
11,636.0	7,132.7	-1,160.4	3,973.7	PTB @ 11636' MD	

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S19-T3N-R68W (Bohrer/Boyd)

Bohrer 2H-19H-E368

Hz

Design: FINAL

Survey Report - Geographic

07 July, 2014

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2H-19H-E368
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5090.0ft (Patterson 326)
Site:	S19-T3N-R68W (Bohrer/Boyd)	MD Reference:	32' KB @ 5090.0ft (Patterson 326)
Well:	Bohrer 2H-19H-E368	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

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	S19-T3N-R68W (Bohrer/Boyd)				
Site Position:		Northing:	1,318,413.13 ft	Latitude:	40.206570
From:	Lat/Long	Easting:	3,124,860.64 ft	Longitude:	-105.052980
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.29 °

Well	Bohrer 2H-19H-E368					
Well Position	+N/-S	0.0 ft	Northing:	1,321,226.11 ft	Latitude:	40.214290
	+E/-W	0.0 ft	Easting:	3,124,994.48 ft	Longitude:	-105.052450
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,058.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/30/2014	8.59	66.75	52,681

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	90.00	

Survey Program	Date	7/7/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
145.0	11,636.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	1,321,226.11	3,124,994.48	40.214290	-105.052450	
145.0	0.80	65.80	145.0	0.4	0.9	1,321,226.53	3,124,995.40	40.214291	-105.052447	
239.0	0.30	202.40	239.0	0.5	1.4	1,321,226.58	3,124,995.90	40.214291	-105.052445	
334.0	1.40	213.50	334.0	-0.7	0.7	1,321,225.37	3,124,995.17	40.214288	-105.052448	
428.0	2.10	226.30	427.9	-2.9	-1.2	1,321,223.22	3,124,993.31	40.214282	-105.052455	
523.0	3.40	233.70	522.8	-5.8	-4.7	1,321,220.33	3,124,989.79	40.214274	-105.052467	
617.0	5.00	232.30	616.6	-9.9	-10.2	1,321,216.15	3,124,984.32	40.214263	-105.052487	
712.0	6.40	219.30	711.1	-16.5	-16.8	1,321,209.48	3,124,977.73	40.214245	-105.052511	
806.0	5.00	213.20	804.6	-24.0	-22.4	1,321,201.97	3,124,972.20	40.214224	-105.052530	
820.0	4.90	209.50	818.6	-25.1	-23.0	1,321,200.94	3,124,971.58	40.214221	-105.052533	
930.0	6.40	214.20	928.0	-34.2	-28.8	1,321,191.75	3,124,965.87	40.214196	-105.052553	
1,025.0	7.80	214.70	1,022.3	-43.9	-35.4	1,321,182.04	3,124,959.27	40.214170	-105.052577	

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2H-19H-E368
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5090.0ft (Patterson 326)
Site:	S19-T3N-R68W (Bohrer/Boyd)	MD Reference:	32' KB @ 5090.0ft (Patterson 326)
Well:	Bohrer 2H-19H-E368	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
1,120.0	9.10	217.10	1,116.3	-55.2	-43.6	1,321,170.70	3,124,951.13	40.214139	-105.052606
1,215.0	10.90	216.70	1,209.8	-68.4	-53.5	1,321,157.46	3,124,941.29	40.214102	-105.052642
1,310.0	10.00	211.20	1,303.3	-82.6	-63.2	1,321,143.15	3,124,931.72	40.214063	-105.052676
1,404.0	10.50	214.10	1,395.8	-96.7	-72.2	1,321,129.03	3,124,922.76	40.214025	-105.052709
1,496.0	10.50	213.30	1,486.2	-110.7	-81.5	1,321,115.04	3,124,913.53	40.213986	-105.052742
1,589.0	9.80	209.30	1,577.8	-124.6	-90.0	1,321,101.01	3,124,905.08	40.213948	-105.052773
1,681.0	10.40	210.70	1,668.3	-138.6	-98.1	1,321,087.00	3,124,897.08	40.213910	-105.052802
1,773.0	11.20	217.80	1,758.7	-152.8	-107.8	1,321,072.75	3,124,887.43	40.213871	-105.052836
1,865.0	12.30	216.20	1,848.8	-167.8	-119.1	1,321,057.73	3,124,876.24	40.213829	-105.052877
1,957.0	13.10	216.10	1,938.5	-184.1	-131.0	1,321,041.34	3,124,864.40	40.213785	-105.052919
2,049.0	13.10	212.90	2,028.1	-201.3	-142.8	1,321,024.10	3,124,852.68	40.213737	-105.052962
2,141.0	13.90	215.90	2,117.6	-219.0	-155.0	1,321,006.33	3,124,840.62	40.213689	-105.053005
2,232.0	13.10	212.10	2,206.1	-236.6	-166.9	1,320,988.68	3,124,828.82	40.213641	-105.053048
2,324.0	13.20	215.50	2,295.7	-254.0	-178.5	1,320,971.24	3,124,817.27	40.213593	-105.053089
2,416.0	12.40	212.50	2,385.4	-270.9	-189.9	1,320,954.30	3,124,805.95	40.213547	-105.053130
2,509.0	12.40	219.00	2,476.2	-287.0	-201.5	1,320,938.06	3,124,794.38	40.213502	-105.053172
2,601.0	10.60	213.80	2,566.4	-301.8	-212.5	1,320,923.29	3,124,783.53	40.213462	-105.053211
2,692.0	11.50	222.70	2,655.7	-315.4	-223.3	1,320,909.62	3,124,772.79	40.213424	-105.053250
2,785.0	12.10	218.40	2,746.7	-329.8	-235.6	1,320,895.10	3,124,760.52	40.213385	-105.053294
2,879.0	12.70	213.20	2,838.5	-346.2	-247.4	1,320,878.67	3,124,748.82	40.213340	-105.053336
2,974.0	14.10	215.70	2,931.0	-364.3	-259.9	1,320,860.47	3,124,736.44	40.213290	-105.053381
3,069.0	13.50	226.10	3,023.2	-381.4	-274.6	1,320,843.31	3,124,721.79	40.213243	-105.053434
3,164.0	13.90	227.90	3,115.5	-396.8	-291.1	1,320,827.89	3,124,705.41	40.213201	-105.053493
3,259.0	11.60	225.40	3,208.2	-411.1	-306.3	1,320,813.45	3,124,690.21	40.213161	-105.053547
3,354.0	13.80	220.70	3,300.9	-426.4	-320.5	1,320,798.08	3,124,676.10	40.213119	-105.053598
3,449.0	14.70	215.50	3,392.9	-444.8	-334.9	1,320,779.61	3,124,661.80	40.213069	-105.053650
3,544.0	16.10	215.80	3,484.5	-465.3	-349.6	1,320,759.04	3,124,647.20	40.213013	-105.053702
3,639.0	14.20	214.40	3,576.2	-485.6	-363.9	1,320,738.66	3,124,633.01	40.212957	-105.053753
3,734.0	14.50	216.10	3,668.2	-504.8	-377.5	1,320,719.37	3,124,619.52	40.212904	-105.053802
3,828.0	14.80	215.30	3,759.2	-524.1	-391.4	1,320,699.99	3,124,605.74	40.212851	-105.053852
3,922.0	14.00	214.30	3,850.2	-543.3	-404.7	1,320,680.74	3,124,592.50	40.212799	-105.053899
4,017.0	13.40	215.10	3,942.5	-561.8	-417.5	1,320,662.17	3,124,579.78	40.212748	-105.053945
4,112.0	14.00	210.80	4,034.8	-580.7	-429.7	1,320,643.23	3,124,567.67	40.212696	-105.053989
4,207.0	11.90	211.80	4,127.4	-598.9	-440.8	1,320,624.98	3,124,556.71	40.212646	-105.054029
4,302.0	10.90	213.80	4,220.5	-614.7	-451.0	1,320,609.14	3,124,546.63	40.212603	-105.054065
4,397.0	12.40	215.40	4,313.6	-630.5	-461.9	1,320,593.31	3,124,535.81	40.212559	-105.054104
4,492.0	11.50	215.20	4,406.5	-646.5	-473.2	1,320,577.20	3,124,524.52	40.212515	-105.054145
4,587.0	12.10	212.70	4,499.5	-662.7	-484.1	1,320,561.02	3,124,513.76	40.212471	-105.054184
4,682.0	8.70	215.90	4,592.9	-676.9	-493.7	1,320,546.77	3,124,504.24	40.212432	-105.054218
4,777.0	9.50	211.80	4,686.7	-689.3	-502.0	1,320,534.25	3,124,495.96	40.212398	-105.054248
4,871.0	10.90	209.30	4,779.3	-703.7	-510.4	1,320,519.86	3,124,487.59	40.212358	-105.054278
4,965.0	11.80	214.10	4,871.4	-719.4	-520.2	1,320,504.10	3,124,477.93	40.212315	-105.054313
5,061.0	13.10	213.30	4,965.2	-736.6	-531.7	1,320,486.82	3,124,466.54	40.212268	-105.054354
5,156.0	13.50	213.40	5,057.6	-754.9	-543.7	1,320,468.51	3,124,454.62	40.212218	-105.054397
5,250.0	12.60	215.40	5,149.2	-772.4	-555.7	1,320,450.93	3,124,442.73	40.212170	-105.054440
5,345.0	14.50	215.70	5,241.5	-790.5	-568.6	1,320,432.76	3,124,429.88	40.212120	-105.054486
5,440.0	13.90	213.70	5,333.6	-809.6	-581.9	1,320,413.54	3,124,416.70	40.212067	-105.054534
5,534.0	15.70	213.50	5,424.5	-829.6	-595.2	1,320,393.47	3,124,403.52	40.212013	-105.054581
5,629.0	15.70	214.60	5,516.0	-850.9	-609.5	1,320,372.10	3,124,389.23	40.211954	-105.054633
5,724.0	13.70	218.50	5,607.9	-870.3	-623.8	1,320,352.64	3,124,375.03	40.211901	-105.054684
5,818.0	12.80	215.30	5,699.4	-887.5	-636.8	1,320,335.37	3,124,362.17	40.211854	-105.054730
5,913.0	13.80	218.50	5,791.8	-905.0	-649.9	1,320,317.84	3,124,349.12	40.211806	-105.054777
6,008.0	13.00	217.20	5,884.2	-922.4	-663.4	1,320,300.40	3,124,335.70	40.211758	-105.054826
6,103.0	11.40	222.60	5,977.1	-937.8	-676.3	1,320,284.91	3,124,322.96	40.211716	-105.054872
6,197.0	11.80	219.10	6,069.2	-952.1	-688.6	1,320,270.55	3,124,310.68	40.211676	-105.054916

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2H-19H-E368
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5090.0ft (Patterson 326)
Site:	S19-T3N-R68W (Bohrer/Boyd)	MD Reference:	32' KB @ 5090.0ft (Patterson 326)
Well:	Bohrer 2H-19H-E368	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
6,292.0	12.20	214.40	6,162.1	-967.9	-700.4	1,320,254.67	3,124,298.96	40.211633	-105.054958
6,387.0	8.70	213.60	6,255.5	-982.2	-710.1	1,320,240.35	3,124,289.38	40.211594	-105.054993
6,434.0	7.60	211.30	6,302.0	-987.8	-713.6	1,320,234.71	3,124,285.83	40.211578	-105.055006
6,482.0	7.30	187.80	6,349.6	-993.5	-715.7	1,320,228.97	3,124,283.80	40.211563	-105.055013
6,529.0	7.90	162.60	6,396.2	-999.6	-715.1	1,320,222.93	3,124,284.39	40.211546	-105.055011
6,576.0	8.70	133.80	6,442.8	-1,005.1	-711.6	1,320,217.40	3,124,287.95	40.211531	-105.054998
6,623.0	10.90	103.90	6,489.1	-1,008.7	-704.7	1,320,213.91	3,124,294.85	40.211521	-105.054974
6,671.0	12.70	95.60	6,536.1	-1,010.3	-695.1	1,320,212.35	3,124,304.52	40.211517	-105.054939
6,718.0	14.60	95.20	6,581.8	-1,011.3	-684.0	1,320,211.37	3,124,315.56	40.211514	-105.054899
6,765.0	16.30	98.60	6,627.1	-1,012.8	-671.6	1,320,209.90	3,124,327.99	40.211510	-105.054855
6,812.0	18.40	102.00	6,671.9	-1,015.4	-657.8	1,320,207.45	3,124,341.79	40.211503	-105.054806
6,860.0	20.50	102.30	6,717.2	-1,018.7	-642.2	1,320,204.16	3,124,357.43	40.211494	-105.054750
6,907.0	23.00	100.40	6,760.8	-1,022.1	-625.1	1,320,200.83	3,124,374.52	40.211484	-105.054689
6,955.0	28.70	99.40	6,804.0	-1,025.7	-604.5	1,320,197.36	3,124,395.15	40.211474	-105.054615
7,002.0	36.70	101.20	6,843.5	-1,030.3	-579.6	1,320,192.91	3,124,420.12	40.211462	-105.054525
7,050.0	43.10	102.90	6,880.3	-1,036.7	-549.5	1,320,186.60	3,124,450.24	40.211444	-105.054418
7,097.0	48.50	103.50	6,913.1	-1,044.4	-516.7	1,320,179.07	3,124,483.07	40.211423	-105.054300
7,144.0	53.50	103.90	6,942.7	-1,053.1	-481.2	1,320,170.60	3,124,518.59	40.211399	-105.054173
7,191.0	57.60	102.80	6,969.2	-1,062.0	-443.5	1,320,161.85	3,124,556.33	40.211375	-105.054038
7,239.0	59.60	102.30	6,994.2	-1,070.9	-403.5	1,320,153.15	3,124,596.37	40.211350	-105.053895
7,286.0	62.10	101.80	7,017.1	-1,079.5	-363.4	1,320,144.79	3,124,636.55	40.211327	-105.053751
7,334.0	67.60	101.10	7,037.5	-1,088.1	-320.8	1,320,136.39	3,124,679.16	40.211303	-105.053599
7,381.0	76.70	98.80	7,051.9	-1,095.8	-276.8	1,320,128.91	3,124,723.22	40.211282	-105.053441
7,429.0	85.30	95.30	7,059.4	-1,101.6	-229.8	1,320,123.35	3,124,770.25	40.211266	-105.053273
7,476.0	88.50	93.90	7,062.0	-1,105.4	-183.0	1,320,119.83	3,124,817.04	40.211256	-105.053106
7,500.0	89.00	93.80	7,062.5	-1,107.0	-159.1	1,320,118.34	3,124,840.99	40.211251	-105.053020
7,547.0	90.10	93.90	7,062.9	-1,110.1	-112.2	1,320,115.42	3,124,887.90	40.211243	-105.052852
7,550.0	90.01	93.92	7,062.9	-1,110.3	-109.2	1,320,115.23	3,124,890.89	40.211242	-105.052841
7,642.0	87.30	94.60	7,065.0	-1,117.2	-17.5	1,320,108.86	3,124,982.64	40.211223	-105.052513
7,737.0	87.50	94.60	7,069.3	-1,124.8	77.1	1,320,101.73	3,125,077.27	40.211202	-105.052174
7,832.0	87.70	92.80	7,073.3	-1,130.9	171.8	1,320,096.08	3,125,172.01	40.211186	-105.051835
7,927.0	88.30	92.90	7,076.6	-1,135.6	266.7	1,320,091.84	3,125,266.86	40.211173	-105.051495
8,022.0	88.00	92.10	7,079.7	-1,139.8	361.5	1,320,088.17	3,125,361.74	40.211161	-105.051156
8,116.0	88.00	92.40	7,083.0	-1,143.5	455.4	1,320,084.96	3,125,455.63	40.211151	-105.050820
8,211.0	88.70	93.50	7,085.7	-1,148.4	550.2	1,320,080.55	3,125,550.49	40.211138	-105.050480
8,306.0	89.00	91.20	7,087.6	-1,152.2	645.1	1,320,077.14	3,125,645.40	40.211127	-105.050140
8,401.0	88.30	90.60	7,089.8	-1,153.7	740.1	1,320,076.12	3,125,740.37	40.211123	-105.049800
8,496.0	88.10	89.80	7,092.8	-1,154.1	835.0	1,320,076.27	3,125,835.32	40.211122	-105.049460
8,591.0	89.80	91.60	7,094.6	-1,155.2	930.0	1,320,075.59	3,125,930.29	40.211119	-105.049120
8,686.0	90.60	90.30	7,094.2	-1,156.8	1,025.0	1,320,074.49	3,126,025.28	40.211114	-105.048780
8,781.0	91.10	89.80	7,092.8	-1,156.9	1,120.0	1,320,074.89	3,126,120.27	40.211114	-105.048440
8,875.0	89.10	89.30	7,092.7	-1,156.2	1,214.0	1,320,076.10	3,126,214.26	40.211116	-105.048104
8,970.0	87.80	88.00	7,095.2	-1,153.9	1,308.9	1,320,078.82	3,126,309.18	40.211122	-105.047764
9,064.0	88.30	88.10	7,098.4	-1,150.7	1,402.8	1,320,082.49	3,126,403.05	40.211131	-105.047428
9,159.0	88.00	87.60	7,101.5	-1,147.2	1,497.7	1,320,086.53	3,126,497.92	40.211141	-105.047088
9,254.0	88.80	89.50	7,104.2	-1,144.8	1,592.6	1,320,089.41	3,126,592.83	40.211147	-105.046748
9,349.0	88.90	89.50	7,106.1	-1,143.9	1,687.6	1,320,090.72	3,126,687.81	40.211150	-105.046408
9,444.0	89.00	89.40	7,107.8	-1,143.0	1,782.6	1,320,092.11	3,126,782.78	40.211152	-105.046068
9,538.0	88.70	90.40	7,109.7	-1,142.8	1,876.5	1,320,092.75	3,126,876.76	40.211153	-105.045731
9,633.0	89.50	90.10	7,111.2	-1,143.3	1,971.5	1,320,092.82	3,126,971.74	40.211151	-105.045391
9,728.0	90.10	90.30	7,111.5	-1,143.6	2,066.5	1,320,092.96	3,127,066.74	40.211151	-105.045051
9,823.0	88.80	91.00	7,112.4	-1,144.7	2,161.5	1,320,092.37	3,127,161.74	40.211148	-105.044711
9,918.0	89.30	90.90	7,114.0	-1,146.2	2,256.5	1,320,091.27	3,127,256.72	40.211143	-105.044371
10,012.0	90.10	91.80	7,114.5	-1,148.5	2,350.5	1,320,089.53	3,127,350.70	40.211137	-105.044034
10,106.0	89.70	91.90	7,114.7	-1,151.5	2,444.4	1,320,086.97	3,127,444.66	40.211129	-105.043698

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2H-19H-E368
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5090.0ft (Patterson 326)
Site:	S19-T3N-R68W (Bohrer/Boyd)	MD Reference:	32' KB @ 5090.0ft (Patterson 326)
Well:	Bohrer 2H-19H-E368	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
10,200.0	89.40	90.30	7,115.4	-1,153.3	2,538.4	1,320,085.64	3,127,538.65	40.211124	-105.043361
10,295.0	88.40	88.90	7,117.2	-1,152.6	2,633.4	1,320,086.78	3,127,633.62	40.211126	-105.043021
10,389.0	88.70	89.10	7,119.6	-1,151.0	2,727.3	1,320,088.90	3,127,727.56	40.211130	-105.042685
10,484.0	88.90	89.70	7,121.6	-1,150.0	2,822.3	1,320,090.37	3,127,822.53	40.211133	-105.042345
10,578.0	89.20	89.70	7,123.1	-1,149.5	2,916.3	1,320,091.34	3,127,916.51	40.211134	-105.042008
10,673.0	89.60	89.20	7,124.1	-1,148.6	3,011.3	1,320,092.73	3,128,011.50	40.211137	-105.041668
10,767.0	90.20	88.40	7,124.3	-1,146.6	3,105.2	1,320,095.17	3,128,105.47	40.211142	-105.041332
10,862.0	89.50	89.00	7,124.5	-1,144.5	3,200.2	1,320,097.80	3,128,200.43	40.211148	-105.040992
10,956.0	89.70	88.90	7,125.2	-1,142.8	3,294.2	1,320,100.00	3,128,294.40	40.211152	-105.040655
11,051.0	89.80	90.70	7,125.6	-1,142.4	3,389.2	1,320,100.81	3,128,389.39	40.211153	-105.040315
11,145.0	87.80	90.00	7,127.6	-1,143.0	3,483.2	1,320,100.71	3,128,483.37	40.211152	-105.039979
11,240.0	88.80	91.90	7,130.4	-1,144.6	3,578.1	1,320,099.62	3,128,578.31	40.211147	-105.039639
11,333.0	88.80	91.80	7,132.4	-1,147.6	3,671.0	1,320,097.08	3,128,671.26	40.211139	-105.039306
11,427.0	90.20	92.70	7,133.2	-1,151.3	3,765.0	1,320,093.87	3,128,765.20	40.211129	-105.038970
11,522.0	89.90	92.20	7,133.1	-1,155.3	3,859.9	1,320,090.29	3,128,860.13	40.211118	-105.038630
11,586.0	90.30	92.70	7,133.0	-1,158.1	3,923.8	1,320,087.87	3,128,924.06	40.211110	-105.038401
Last CES Survey @ 11586' MD									
11,636.0	90.30	92.70	7,132.7	-1,160.4	3,973.7	1,320,085.77	3,128,974.01	40.211104	-105.038222
PTB @ 11636' MD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Bohrer 2H-19H-E368 PE	0.00	0.00	7,135.0	-1,147.2	4,038.5	1,320,099.36	3,129,038.70	40.211140	-105.037990
- actual wellpath misses target center by 66.1ft at 11636.0ft MD (7132.7 TVD, -1160.4 N, 3973.7 E)									
- Point									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
11,586.0	7,133.0	-1,158.1	3,923.8	Last CES Survey @ 11586' MD	
11,636.0	7,132.7	-1,160.4	3,973.7	PTB @ 11636' MD	

Checked By: _____	Approved By: _____	Date: _____
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