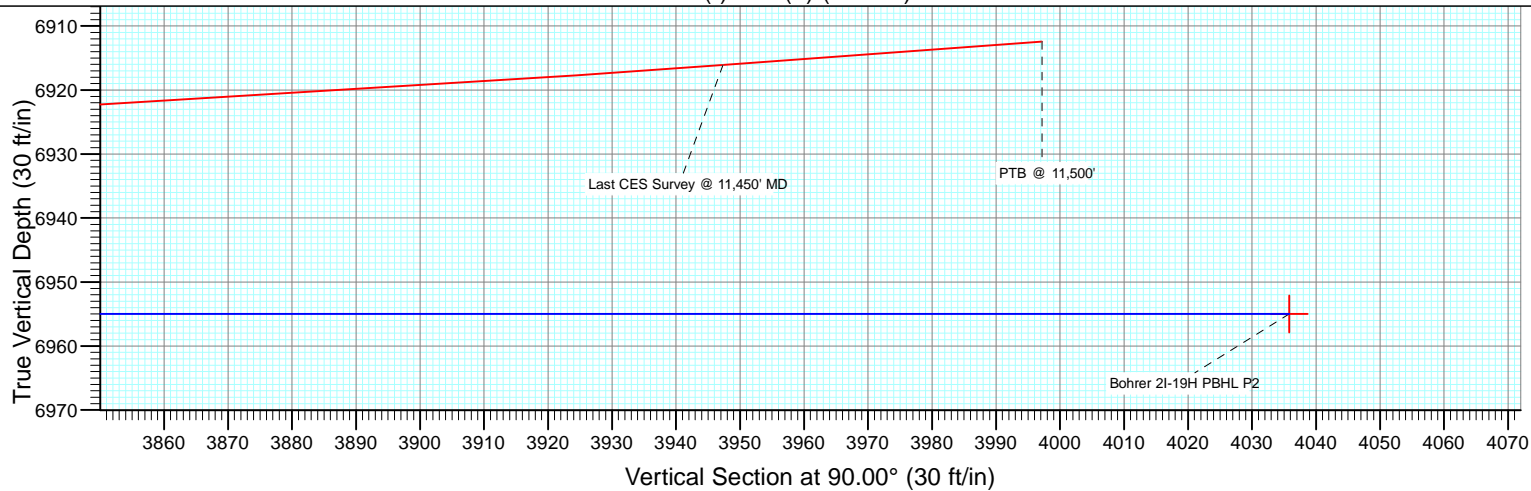
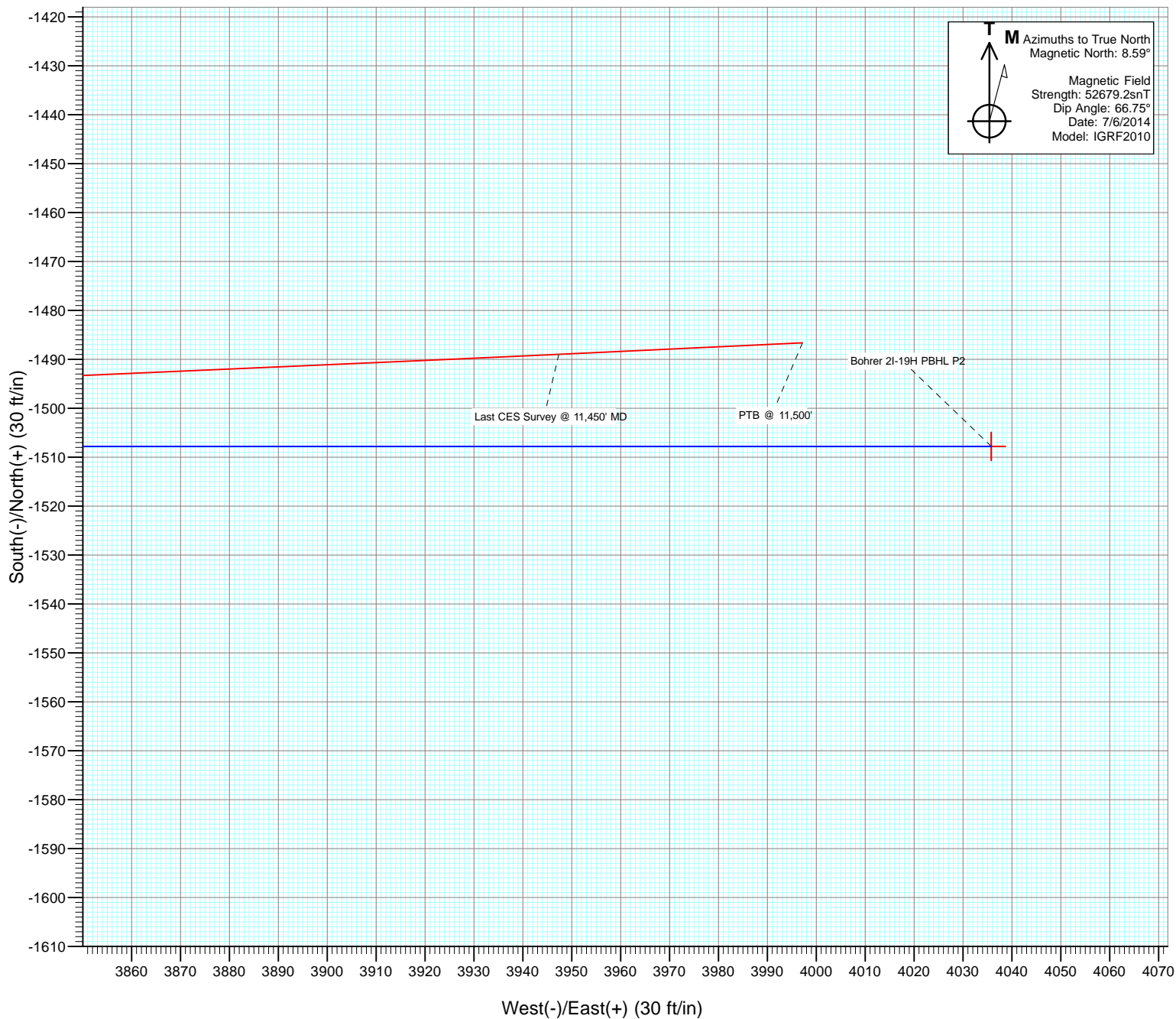




Project: DJ Wattenberg
Site: S19-T3N-R68W (Bohrer/Boyd)
Well: Bohrer 2I-19H-E368
Wellbore: Hz
Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2I-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 2I-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 2I-19H-E368					
Well Position	+N/-S	0.0 ft	Northing:	1,321,215.18 ft	Latitude:	40.214260
	+E/-W	0.0 ft	Easting:	3,124,994.53 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	7/6/2014	8.59	66.75	52,679

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

Survey Program	Date	7/12/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
145.0	11,500.0	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	0.60	340.10	145.0	0.7	-0.3	-0.3	0.41	0.41		
239.0	0.70	255.30	239.0	1.0	-1.0	-1.0	0.94	0.11		
334.0	1.80	216.70	334.0	-0.3	-2.4	-2.4	1.40	1.16		
428.0	2.70	223.20	427.9	-3.1	-4.8	-4.8	0.99	0.96		
523.0	3.60	201.30	522.8	-7.5	-7.4	-7.4	1.57	0.95		
617.0	4.00	191.00	616.6	-13.5	-9.1	-9.1	0.84	0.43		
712.0	5.50	198.60	711.2	-21.1	-11.2	-11.2	1.71	1.58		
806.0	5.60	190.70	804.8	-29.8	-13.5	-13.5	0.82	0.11		
830.0	5.50	195.90	828.7	-32.1	-14.1	-14.1	2.14	-0.42		
930.0	7.30	211.60	928.1	-42.1	-18.7	-18.7	2.49	1.80		
1,025.0	9.70	210.30	1,022.0	-54.2	-25.9	-25.9	2.53	2.53		
1,120.0	9.50	208.00	1,115.7	-68.0	-33.6	-33.6	0.46	-0.21		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2I-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 2I-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	9.10	206.70	1,209.4	-81.6	-40.7	-40.7	0.48	-0.42	
1,310.0	10.00	199.40	1,303.1	-96.1	-46.8	-46.8	1.59	0.95	
1,404.0	9.90	197.40	1,395.7	-111.5	-51.9	-51.9	0.38	-0.11	
1,497.0	10.80	198.40	1,487.2	-127.4	-57.1	-57.1	0.99	0.97	
1,589.0	11.80	203.00	1,577.4	-144.3	-63.5	-63.5	1.46	1.09	
1,681.0	13.00	203.90	1,667.3	-162.4	-71.3	-71.3	1.32	1.30	
1,773.0	13.50	206.40	1,756.8	-181.5	-80.3	-80.3	0.83	0.54	
1,865.0	14.70	204.80	1,846.0	-201.7	-90.0	-90.0	1.37	1.30	
1,957.0	15.60	209.30	1,934.8	-223.1	-100.9	-100.9	1.61	0.98	
2,049.0	16.80	207.80	2,023.2	-245.6	-113.2	-113.2	1.38	1.30	
2,141.0	16.20	205.60	2,111.4	-269.0	-124.9	-124.9	0.94	-0.65	
2,233.0	16.80	207.80	2,199.6	-292.3	-136.7	-136.7	0.94	0.65	
2,325.0	15.60	204.90	2,287.9	-315.3	-148.1	-148.1	1.57	-1.30	
2,417.0	16.90	207.40	2,376.3	-338.4	-159.4	-159.4	1.60	1.41	
2,509.0	17.00	210.70	2,464.3	-361.8	-172.4	-172.4	1.05	0.11	
2,601.0	15.70	205.60	2,552.6	-384.6	-184.7	-184.7	2.10	-1.41	
2,692.0	16.70	209.20	2,639.9	-407.1	-196.4	-196.4	1.56	1.10	
2,785.0	16.40	205.80	2,729.1	-430.6	-208.6	-208.6	1.09	-0.32	
2,879.0	16.50	212.10	2,819.3	-453.9	-221.5	-221.5	1.90	0.11	
2,974.0	16.90	209.40	2,910.3	-477.3	-235.4	-235.4	0.92	0.42	
3,069.0	15.60	207.30	3,001.5	-500.7	-248.1	-248.1	1.50	-1.37	
3,164.0	17.60	210.10	3,092.5	-524.5	-261.1	-261.1	2.27	2.11	
3,259.0	16.10	205.80	3,183.4	-548.8	-274.1	-274.1	2.05	-1.58	
3,354.0	18.00	211.10	3,274.2	-573.2	-287.4	-287.4	2.58	2.00	
3,449.0	17.80	209.50	3,364.6	-598.4	-302.1	-302.1	0.56	-0.21	
3,544.0	18.00	207.30	3,455.0	-624.1	-316.0	-316.0	0.74	0.21	
3,639.0	14.70	216.50	3,546.2	-646.8	-329.9	-329.9	4.41	-3.47	
3,734.0	16.50	217.20	3,637.7	-667.3	-345.2	-345.2	1.91	1.89	
3,828.0	14.50	215.10	3,728.3	-687.5	-360.1	-360.1	2.21	-2.13	
3,923.0	15.80	212.50	3,820.0	-708.2	-373.9	-373.9	1.54	1.37	
4,018.0	18.20	210.70	3,910.8	-731.8	-388.4	-388.4	2.59	2.53	
4,113.0	16.90	208.90	4,001.4	-756.7	-402.7	-402.7	1.48	-1.37	
4,208.0	15.10	207.30	4,092.7	-779.8	-415.0	-415.0	1.95	-1.89	
4,303.0	17.10	207.10	4,184.0	-803.2	-427.0	-427.0	2.11	2.11	
4,397.0	17.10	207.20	4,273.8	-827.8	-439.7	-439.7	0.03	0.00	
4,492.0	16.80	205.30	4,364.7	-852.6	-451.9	-451.9	0.66	-0.32	
4,587.0	15.50	203.60	4,456.0	-876.7	-462.9	-462.9	1.46	-1.37	
4,682.0	15.80	209.10	4,547.4	-899.6	-474.2	-474.2	1.59	0.32	
4,777.0	13.90	206.70	4,639.3	-921.1	-485.6	-485.6	2.10	-2.00	
4,871.0	16.10	202.50	4,730.1	-943.2	-495.7	-495.7	2.61	2.34	
4,966.0	17.10	207.80	4,821.1	-967.8	-507.3	-507.3	1.91	1.05	
5,061.0	18.50	209.00	4,911.5	-993.3	-521.1	-521.1	1.52	1.47	
5,156.0	16.50	205.00	5,002.1	-1,018.7	-534.1	-534.1	2.46	-2.11	
5,251.0	17.70	211.90	5,093.0	-1,043.2	-547.4	-547.4	2.48	1.26	
5,345.0	16.70	212.50	5,182.8	-1,066.7	-562.2	-562.2	1.08	-1.06	
5,440.0	16.70	214.10	5,273.7	-1,089.5	-577.2	-577.2	0.48	0.00	
5,534.0	17.30	211.40	5,363.6	-1,112.7	-592.1	-592.1	1.05	0.64	
5,629.0	17.50	209.80	5,454.3	-1,137.1	-606.5	-606.5	0.55	0.21	
5,724.0	17.40	206.20	5,544.9	-1,162.2	-619.9	-619.9	1.14	-0.11	
5,819.0	16.40	208.70	5,635.8	-1,186.8	-632.6	-632.6	1.30	-1.05	
5,913.0	16.70	207.70	5,725.9	-1,210.4	-645.3	-645.3	0.44	0.32	
6,008.0	17.30	208.00	5,816.8	-1,234.9	-658.2	-658.2	0.64	0.63	
6,103.0	16.80	208.00	5,907.6	-1,259.5	-671.3	-671.3	0.53	-0.53	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2I-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 2I-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
6,198.0	17.10	209.80	5,998.5	-1,283.7	-684.7	-684.7	0.64	0.32	
6,245.0	14.50	206.70	6,043.7	-1,295.0	-690.8	-690.8	5.81	-5.53	
6,293.0	13.20	203.30	6,090.3	-1,305.4	-695.7	-695.7	3.19	-2.71	
6,340.0	12.30	185.90	6,136.2	-1,315.3	-698.3	-698.3	8.36	-1.91	
6,388.0	12.80	169.80	6,183.0	-1,325.6	-697.9	-697.9	7.34	1.04	
6,435.0	13.10	155.20	6,228.8	-1,335.6	-694.7	-694.7	6.97	0.64	
6,482.0	14.50	136.90	6,274.5	-1,344.7	-688.5	-688.5	9.71	2.98	
6,529.0	16.00	123.40	6,319.9	-1,352.6	-679.0	-679.0	8.18	3.19	
6,576.0	18.20	116.80	6,364.8	-1,359.5	-667.1	-667.1	6.23	4.68	
6,623.0	20.60	118.00	6,409.1	-1,366.7	-653.2	-653.2	5.18	5.11	
6,671.0	23.80	119.30	6,453.6	-1,375.4	-637.3	-637.3	6.74	6.67	
6,718.0	27.50	119.60	6,495.9	-1,385.4	-619.6	-619.6	7.88	7.87	
6,766.0	32.60	115.70	6,537.5	-1,396.5	-598.3	-598.3	11.37	10.62	
6,813.0	36.40	115.20	6,576.2	-1,407.9	-574.3	-574.3	8.11	8.09	
6,861.0	40.80	111.50	6,613.7	-1,419.7	-546.8	-546.8	10.35	9.17	
6,908.0	45.80	109.30	6,647.9	-1,430.9	-516.6	-516.6	11.11	10.64	
6,955.0	49.90	107.50	6,679.4	-1,441.9	-483.5	-483.5	9.17	8.72	
7,002.0	51.30	105.30	6,709.3	-1,452.1	-448.7	-448.7	4.69	2.98	
7,050.0	53.60	104.60	6,738.5	-1,462.0	-411.9	-411.9	4.93	4.79	
7,097.0	56.40	104.40	6,765.5	-1,471.6	-374.6	-374.6	5.97	5.96	
7,145.0	60.90	102.40	6,790.4	-1,481.1	-334.8	-334.8	10.03	9.37	
7,192.0	65.50	102.20	6,811.6	-1,490.0	-293.8	-293.8	9.79	9.79	
7,240.0	68.10	103.70	6,830.5	-1,499.9	-250.8	-250.8	6.13	5.42	
7,287.0	73.00	100.30	6,846.2	-1,509.1	-207.5	-207.5	12.46	10.43	
7,335.0	79.30	96.50	6,857.7	-1,515.9	-161.4	-161.4	15.21	13.12	
7,382.0	85.20	93.10	6,864.0	-1,519.8	-115.0	-115.0	14.45	12.55	
7,430.0	88.00	91.00	6,866.8	-1,521.5	-67.1	-67.1	7.29	5.83	
7,455.0	88.40	89.40	6,867.6	-1,521.6	-42.1	-42.1	6.59	1.60	
7,547.0	89.60	84.20	6,869.2	-1,516.4	49.7	49.7	5.80	1.30	
7,642.0	89.80	84.60	6,869.7	-1,507.2	144.2	144.2	0.47	0.21	
7,737.0	88.50	85.70	6,871.1	-1,499.1	238.9	238.9	1.79	-1.37	
7,832.0	87.00	87.30	6,874.9	-1,493.3	333.6	333.6	2.31	-1.58	
7,927.0	86.50	89.30	6,880.3	-1,490.5	428.4	428.4	2.17	-0.53	
8,022.0	85.30	91.60	6,887.1	-1,491.3	523.2	523.2	2.73	-1.26	
8,116.0	87.30	94.00	6,893.1	-1,495.8	616.8	616.8	3.32	2.13	
8,211.0	88.00	93.80	6,897.0	-1,502.3	711.5	711.5	0.77	0.74	
8,306.0	87.80	93.10	6,900.5	-1,508.0	806.3	806.3	0.77	-0.21	
8,401.0	86.20	92.30	6,905.5	-1,512.5	901.1	901.1	1.88	-1.68	
8,496.0	86.00	91.60	6,911.9	-1,515.7	995.8	995.8	0.76	-0.21	
8,591.0	86.80	91.80	6,917.9	-1,518.5	1,090.6	1,090.6	0.87	0.84	
8,686.0	86.50	91.20	6,923.4	-1,521.0	1,185.4	1,185.4	0.71	-0.32	
8,781.0	86.90	91.30	6,928.9	-1,523.1	1,280.2	1,280.2	0.43	0.42	
8,875.0	88.00	91.40	6,933.1	-1,525.3	1,374.1	1,374.1	1.18	1.17	
8,970.0	87.40	89.70	6,936.9	-1,526.2	1,469.0	1,469.0	1.90	-0.63	
9,065.0	87.70	89.60	6,941.0	-1,525.6	1,563.9	1,563.9	0.33	0.32	
9,159.0	88.20	89.30	6,944.3	-1,524.7	1,657.8	1,657.8	0.62	0.53	
9,254.0	87.40	88.60	6,948.0	-1,523.0	1,752.7	1,752.7	1.12	-0.84	
9,349.0	88.50	89.10	6,951.4	-1,521.1	1,847.6	1,847.6	1.27	1.16	
9,444.0	88.00	88.30	6,954.3	-1,518.9	1,942.6	1,942.6	0.99	-0.53	
9,539.0	89.10	87.30	6,956.7	-1,515.3	2,037.5	2,037.5	1.56	1.16	
9,633.0	89.60	86.80	6,957.7	-1,510.4	2,131.3	2,131.3	0.75	0.53	
9,728.0	91.20	88.10	6,957.1	-1,506.2	2,226.2	2,226.2	2.17	1.68	
9,823.0	90.70	89.40	6,955.5	-1,504.1	2,321.2	2,321.2	1.47	-0.53	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2I-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 2I-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	91.60	90.00	6,953.6	-1,503.6	2,416.2	2,416.2	1.14	0.95	
10,012.0	91.60	89.20	6,951.0	-1,503.0	2,510.1	2,510.1	0.85	0.00	
10,106.0	91.30	90.80	6,948.6	-1,503.0	2,604.1	2,604.1	1.73	-0.32	
10,200.0	91.30	90.60	6,946.5	-1,504.1	2,698.1	2,698.1	0.21	0.00	
10,295.0	91.10	88.90	6,944.5	-1,503.7	2,793.1	2,793.1	1.80	-0.21	
10,389.0	91.00	90.20	6,942.8	-1,503.0	2,887.0	2,887.0	1.39	-0.11	
10,484.0	90.90	90.30	6,941.2	-1,503.4	2,982.0	2,982.0	0.15	-0.11	
10,578.0	90.70	89.10	6,939.9	-1,502.9	3,076.0	3,076.0	1.29	-0.21	
10,673.0	90.70	89.90	6,938.7	-1,502.1	3,171.0	3,171.0	0.84	0.00	
10,767.0	90.60	89.60	6,937.6	-1,501.7	3,265.0	3,265.0	0.34	-0.11	
10,862.0	91.60	89.70	6,935.8	-1,501.1	3,360.0	3,360.0	1.06	1.05	
10,956.0	91.00	89.60	6,933.7	-1,500.5	3,453.9	3,453.9	0.65	-0.64	
11,051.0	91.30	89.80	6,931.8	-1,500.0	3,548.9	3,548.9	0.38	0.32	
11,145.0	90.70	89.30	6,930.1	-1,499.3	3,642.9	3,642.9	0.83	-0.64	
11,240.0	92.20	88.40	6,927.7	-1,497.4	3,737.8	3,737.8	1.84	1.58	
11,333.0	93.10	87.60	6,923.4	-1,494.1	3,830.7	3,830.7	1.29	0.97	
11,427.0	93.90	87.40	6,917.7	-1,490.0	3,924.4	3,924.4	0.88	0.85	
11,450.0	94.20	87.30	6,916.1	-1,489.0	3,947.3	3,947.3	1.37	1.30	Last CES Survey @ 11,450' MD
11,500.0	94.20	87.30	6,912.4	-1,486.6	3,997.2	3,997.2	0.00	0.00	PTB @ 11,500'

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Bohrer 2I-19H TGT 1	0.00	0.00	6,935.0	-1,507.8	1,507.1	1,319,715.01	3,126,509.22	40.210121	-105.047054
- actual wellpath misses target center by 18.5ft at 9008.1ft MD (6938.6 TVD, -1526.0 N, 1507.1 E)									
- Point									
Bohrer 2I-19H LP	0.00	0.00	6,880.0	-1,507.8	-140.0	1,319,706.69	3,124,862.14	40.210121	-105.052951
- actual wellpath misses target center by 21.3ft at 7358.5ft MD (6861.4 TVD, -1518.2 N, -138.3 E)									
- Point									
Bohrer 2I-19H TGT 2	0.00	0.00	6,955.0	-1,507.8	2,007.1	1,319,717.53	3,127,009.22	40.210121	-105.045264
- actual wellpath misses target center by 8.9ft at 9508.9ft MD (6956.1 TVD, -1516.6 N, 2007.4 E)									
- Point									
Bohrer 2I-19H-E368 PBI	0.00	0.00	6,860.0	-1,507.8	4,035.8	1,319,727.78	3,129,037.85	40.210120	-105.038000
- actual wellpath misses target center by 68.4ft at 11500.0ft MD (6912.4 TVD, -1486.6 N, 3997.2 E)									
- Point									
Bohrer 2I-19H PBHL P2	0.00	0.00	6,955.0	-1,507.8	4,035.8	1,319,727.77	3,129,037.89	40.210120	-105.038000
- actual wellpath misses target center by 61.3ft at 11500.0ft MD (6912.4 TVD, -1486.6 N, 3997.2 E)									
- Point									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
11,450.0	6,916.1	-1,489.0	3,947.3	Last CES Survey @ 11,450' MD
11,500.0	6,912.4	-1,486.6	3,997.2	PTB @ 11,500'

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S19-T3N-R68W (Bohrer/Boyd)

Bohrer 2I-19H-E368

Hz

Design: FINAL

Survey Report - Geographic

13 July, 2014

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2I-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 2I-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 2I-19H-E368					
Well Position	+N/-S	0.0 ft	Northing:	1,321,215.18 ft	Latitude:	40.214260
	+E/-W	0.0 ft	Easting:	3,124,994.53 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	7/6/2014	8.59	66.75	52,679

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	7/12/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
145.0	11,500.0	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	1,321,215.18	3,124,994.53	40.214260	-105.052450	
145.0	0.60	340.10	145.0	0.7	-0.3	1,321,215.89	3,124,994.27	40.214262	-105.052451	
239.0	0.70	255.30	239.0	1.0	-1.0	1,321,216.21	3,124,993.55	40.214263	-105.052454	
334.0	1.80	216.70	334.0	-0.3	-2.4	1,321,214.86	3,124,992.10	40.214259	-105.052459	
428.0	2.70	223.20	427.9	-3.1	-4.8	1,321,212.05	3,124,989.72	40.214251	-105.052468	
523.0	3.60	201.30	522.8	-7.5	-7.4	1,321,207.62	3,124,987.12	40.214239	-105.052477	
617.0	4.00	191.00	616.6	-13.5	-9.1	1,321,201.65	3,124,985.46	40.214223	-105.052483	
712.0	5.50	198.60	711.2	-21.1	-11.2	1,321,194.07	3,124,983.41	40.214202	-105.052490	
806.0	5.60	190.70	804.8	-29.8	-13.5	1,321,185.28	3,124,981.16	40.214178	-105.052499	
830.0	5.50	195.90	828.7	-32.1	-14.1	1,321,183.02	3,124,980.64	40.214172	-105.052501	
930.0	7.30	211.60	928.1	-42.1	-18.7	1,321,172.97	3,124,976.05	40.214144	-105.052517	
1,025.0	9.70	210.30	1,022.0	-54.2	-25.9	1,321,160.89	3,124,968.91	40.214111	-105.052543	

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2I-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 2I-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	9.50	208.00	1,115.7	-68.0	-33.6	1,321,147.02	3,124,961.26	40.214073	-105.052571
1,215.0	9.10	206.70	1,209.4	-81.6	-40.7	1,321,133.35	3,124,954.28	40.214036	-105.052596
1,310.0	10.00	199.40	1,303.1	-96.1	-46.8	1,321,118.82	3,124,948.23	40.213996	-105.052618
1,404.0	9.90	197.40	1,395.7	-111.5	-51.9	1,321,103.39	3,124,943.18	40.213954	-105.052636
1,497.0	10.80	198.40	1,487.2	-127.4	-57.1	1,321,087.47	3,124,938.12	40.213910	-105.052655
1,589.0	11.80	203.00	1,577.4	-144.3	-63.5	1,321,070.59	3,124,931.81	40.213864	-105.052677
1,681.0	13.00	203.90	1,667.3	-162.4	-71.3	1,321,052.44	3,124,924.03	40.213814	-105.052706
1,773.0	13.50	206.40	1,756.8	-181.5	-80.3	1,321,033.31	3,124,915.16	40.213762	-105.052738
1,865.0	14.70	204.80	1,846.0	-201.7	-90.0	1,321,013.05	3,124,905.59	40.213706	-105.052772
1,957.0	15.60	209.30	1,934.8	-223.1	-100.9	1,320,991.61	3,124,894.75	40.213648	-105.052812
2,049.0	16.80	207.80	2,023.2	-245.6	-113.2	1,320,968.99	3,124,882.61	40.213586	-105.052855
2,141.0	16.20	205.60	2,111.4	-269.0	-124.9	1,320,945.60	3,124,870.98	40.213522	-105.052898
2,233.0	16.80	207.80	2,199.6	-292.3	-136.7	1,320,922.21	3,124,859.35	40.213458	-105.052940
2,325.0	15.60	204.90	2,287.9	-315.3	-148.1	1,320,899.17	3,124,848.06	40.213395	-105.052980
2,417.0	16.90	207.40	2,376.3	-338.4	-159.4	1,320,876.02	3,124,836.81	40.213331	-105.053021
2,509.0	17.00	210.70	2,464.3	-361.8	-172.4	1,320,852.51	3,124,823.91	40.213267	-105.053068
2,601.0	15.70	205.60	2,552.6	-384.6	-184.7	1,320,829.66	3,124,811.78	40.213204	-105.053112
2,692.0	16.70	209.20	2,639.9	-407.1	-196.4	1,320,807.08	3,124,800.20	40.213142	-105.053153
2,785.0	16.40	205.80	2,729.1	-430.6	-208.6	1,320,783.54	3,124,788.08	40.213078	-105.053197
2,879.0	16.50	212.10	2,819.3	-453.9	-221.5	1,320,760.22	3,124,775.33	40.213014	-105.053243
2,974.0	16.90	209.40	2,910.3	-477.3	-235.4	1,320,736.69	3,124,761.50	40.212950	-105.053293
3,069.0	15.60	207.30	3,001.5	-500.7	-248.1	1,320,713.24	3,124,748.98	40.212886	-105.053339
3,164.0	17.60	210.10	3,092.5	-524.5	-261.1	1,320,689.40	3,124,736.04	40.212820	-105.053385
3,259.0	16.10	205.80	3,183.4	-548.8	-274.1	1,320,665.04	3,124,723.22	40.212754	-105.053432
3,354.0	18.00	211.10	3,274.2	-573.2	-287.4	1,320,640.55	3,124,710.03	40.212687	-105.053479
3,449.0	17.80	209.50	3,364.6	-598.4	-302.1	1,320,615.26	3,124,695.42	40.212617	-105.053532
3,544.0	18.00	207.30	3,455.0	-624.1	-316.0	1,320,589.51	3,124,681.67	40.212547	-105.053582
3,639.0	14.70	216.50	3,546.2	-646.8	-329.9	1,320,566.70	3,124,667.88	40.212484	-105.053632
3,734.0	16.50	217.20	3,637.7	-667.3	-345.2	1,320,546.19	3,124,652.65	40.212428	-105.053686
3,828.0	14.50	215.10	3,728.3	-687.5	-360.1	1,320,525.85	3,124,637.92	40.212373	-105.053740
3,923.0	15.80	212.50	3,820.0	-708.2	-373.9	1,320,505.14	3,124,624.23	40.212316	-105.053789
4,018.0	18.20	210.70	3,910.8	-731.8	-388.4	1,320,481.40	3,124,609.83	40.212251	-105.053841
4,113.0	16.90	208.90	4,001.4	-756.7	-402.7	1,320,456.48	3,124,595.71	40.212183	-105.053892
4,208.0	15.10	207.30	4,092.7	-779.8	-415.0	1,320,433.33	3,124,583.47	40.212119	-105.053936
4,303.0	17.10	207.10	4,184.0	-803.2	-427.0	1,320,409.84	3,124,571.55	40.212055	-105.053979
4,397.0	17.10	207.20	4,273.8	-827.8	-439.7	1,320,385.18	3,124,559.06	40.211988	-105.054024
4,492.0	16.80	205.30	4,364.7	-852.6	-451.9	1,320,360.29	3,124,546.94	40.211919	-105.054068
4,587.0	15.50	203.60	4,456.0	-876.7	-462.9	1,320,336.19	3,124,536.11	40.211853	-105.054108
4,682.0	15.80	209.10	4,547.4	-899.6	-474.2	1,320,313.19	3,124,524.85	40.211791	-105.054148
4,777.0	13.90	206.70	4,639.3	-921.1	-485.6	1,320,291.64	3,124,513.54	40.211732	-105.054189
4,871.0	16.10	202.50	4,730.1	-943.2	-495.7	1,320,269.46	3,124,503.59	40.211671	-105.054225
4,966.0	17.10	207.80	4,821.1	-967.8	-507.3	1,320,244.87	3,124,492.16	40.211603	-105.054267
5,061.0	18.50	209.00	4,911.5	-993.3	-521.1	1,320,219.27	3,124,478.47	40.211533	-105.054316
5,156.0	16.50	205.00	5,002.1	-1,018.7	-534.1	1,320,193.79	3,124,465.59	40.211464	-105.054363
5,251.0	17.70	211.90	5,093.0	-1,043.2	-547.4	1,320,169.23	3,124,452.37	40.211396	-105.054410
5,345.0	16.70	212.50	5,182.8	-1,066.7	-562.2	1,320,145.63	3,124,437.69	40.211332	-105.054463
5,440.0	16.70	214.10	5,273.7	-1,089.5	-577.2	1,320,122.74	3,124,422.81	40.211269	-105.054517
5,534.0	17.30	211.40	5,363.6	-1,112.7	-592.1	1,320,099.55	3,124,408.08	40.211206	-105.054570
5,629.0	17.50	209.80	5,454.3	-1,137.1	-606.5	1,320,075.03	3,124,393.74	40.211139	-105.054622
5,724.0	17.40	206.20	5,544.9	-1,162.2	-619.9	1,320,049.82	3,124,380.50	40.211070	-105.054670
5,819.0	16.40	208.70	5,635.8	-1,186.8	-632.6	1,320,025.25	3,124,367.91	40.211002	-105.054715
5,913.0	16.70	207.70	5,725.9	-1,210.4	-645.3	1,320,001.59	3,124,355.38	40.210937	-105.054761
6,008.0	17.30	208.00	5,816.8	-1,234.9	-658.2	1,319,976.96	3,124,342.53	40.210870	-105.054807
6,103.0	16.80	208.00	5,907.6	-1,259.5	-671.3	1,319,952.30	3,124,329.57	40.210803	-105.054854
6,198.0	17.10	209.80	5,998.5	-1,283.7	-684.7	1,319,927.99	3,124,316.31	40.210736	-105.054902

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2I-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 2I-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
6,245.0	14.50	206.70	6,043.7	-1,295.0	-690.8	1,319,916.71	3,124,310.29	40.210705	-105.054924
6,293.0	13.20	203.30	6,090.3	-1,305.4	-695.7	1,319,906.28	3,124,305.47	40.210677	-105.054941
6,340.0	12.30	185.90	6,136.2	-1,315.3	-698.3	1,319,896.36	3,124,302.88	40.210649	-105.054951
6,388.0	12.80	169.80	6,183.0	-1,325.6	-697.9	1,319,886.04	3,124,303.35	40.210621	-105.054949
6,435.0	13.10	155.20	6,228.8	-1,335.6	-694.7	1,319,876.09	3,124,306.56	40.210594	-105.054938
6,482.0	14.50	136.90	6,274.5	-1,344.7	-688.5	1,319,866.99	3,124,312.86	40.210569	-105.054915
6,529.0	16.00	123.40	6,319.9	-1,352.6	-679.0	1,319,859.17	3,124,322.33	40.210547	-105.054882
6,576.0	18.20	116.80	6,364.8	-1,359.5	-667.1	1,319,852.35	3,124,334.33	40.210528	-105.054839
6,623.0	20.60	118.00	6,409.1	-1,366.7	-653.2	1,319,845.23	3,124,348.22	40.210508	-105.054789
6,671.0	23.80	119.30	6,453.6	-1,375.4	-637.3	1,319,836.61	3,124,364.17	40.210484	-105.054732
6,718.0	27.50	119.60	6,495.9	-1,385.4	-619.6	1,319,826.69	3,124,381.93	40.210457	-105.054669
6,766.0	32.60	115.70	6,537.5	-1,396.5	-598.3	1,319,815.71	3,124,403.29	40.210427	-105.054592
6,813.0	36.40	115.20	6,576.2	-1,407.9	-574.3	1,319,804.40	3,124,427.38	40.210395	-105.054506
6,861.0	40.80	111.50	6,613.7	-1,419.7	-546.8	1,319,792.72	3,124,454.94	40.210363	-105.054408
6,908.0	45.80	109.30	6,647.9	-1,430.9	-516.6	1,319,781.67	3,124,485.20	40.210332	-105.054300
6,955.0	49.90	107.50	6,679.4	-1,441.9	-483.5	1,319,770.85	3,124,518.32	40.210302	-105.054181
7,002.0	51.30	105.30	6,709.3	-1,452.1	-448.7	1,319,760.78	3,124,553.21	40.210274	-105.054057
7,050.0	53.60	104.60	6,738.5	-1,462.0	-411.9	1,319,751.16	3,124,590.02	40.210247	-105.053925
7,097.0	56.40	104.40	6,765.5	-1,471.6	-374.6	1,319,741.71	3,124,627.34	40.210220	-105.053792
7,145.0	60.90	102.40	6,790.4	-1,481.1	-334.8	1,319,732.43	3,124,667.25	40.210194	-105.053649
7,192.0	65.50	102.20	6,811.6	-1,490.0	-293.8	1,319,723.70	3,124,708.28	40.210170	-105.053502
7,240.0	68.10	103.70	6,830.5	-1,499.9	-250.8	1,319,714.03	3,124,751.32	40.210143	-105.053348
7,287.0	73.00	100.30	6,846.2	-1,509.1	-207.5	1,319,705.06	3,124,794.69	40.210117	-105.053193
7,335.0	79.30	96.50	6,857.7	-1,515.9	-161.4	1,319,698.51	3,124,840.80	40.210099	-105.053028
7,382.0	85.20	93.10	6,864.0	-1,519.8	-115.0	1,319,694.86	3,124,887.20	40.210088	-105.052862
7,430.0	88.00	91.00	6,866.8	-1,521.5	-67.1	1,319,693.39	3,124,935.09	40.210083	-105.052691
7,455.0	88.40	89.40	6,867.6	-1,521.6	-42.1	1,319,693.42	3,124,960.07	40.210083	-105.052601
7,547.0	89.60	84.20	6,869.2	-1,516.4	49.7	1,319,699.02	3,125,051.86	40.210097	-105.052272
7,642.0	89.80	84.60	6,869.7	-1,507.2	144.2	1,319,708.77	3,125,146.35	40.210123	-105.051934
7,737.0	88.50	85.70	6,871.1	-1,499.1	238.9	1,319,717.28	3,125,240.96	40.210145	-105.051595
7,832.0	87.00	87.30	6,874.9	-1,493.3	333.6	1,319,723.55	3,125,335.67	40.210161	-105.051256
7,927.0	86.50	89.30	6,880.3	-1,490.5	428.4	1,319,726.84	3,125,430.46	40.210168	-105.050916
8,022.0	85.30	91.60	6,887.1	-1,491.3	523.2	1,319,726.58	3,125,525.20	40.210166	-105.050577
8,116.0	87.30	94.00	6,893.1	-1,495.8	616.8	1,319,722.47	3,125,618.91	40.210154	-105.050242
8,211.0	88.00	93.80	6,897.0	-1,502.3	711.5	1,319,716.49	3,125,713.64	40.210136	-105.049903
8,306.0	87.80	93.10	6,900.5	-1,508.0	806.3	1,319,711.26	3,125,808.43	40.210120	-105.049563
8,401.0	86.20	92.30	6,905.5	-1,512.5	901.1	1,319,707.26	3,125,903.21	40.210108	-105.049224
8,496.0	86.00	91.60	6,911.9	-1,515.7	995.8	1,319,704.52	3,125,997.95	40.210099	-105.048885
8,591.0	86.80	91.80	6,917.9	-1,518.5	1,090.6	1,319,702.18	3,126,092.73	40.210091	-105.048546
8,686.0	86.50	91.20	6,923.4	-1,521.0	1,185.4	1,319,700.18	3,126,187.55	40.210085	-105.048206
8,781.0	86.90	91.30	6,928.9	-1,523.1	1,280.2	1,319,698.59	3,126,282.38	40.210079	-105.047867
8,875.0	88.00	91.40	6,933.1	-1,525.3	1,374.1	1,319,696.85	3,126,376.27	40.210073	-105.047530
8,970.0	87.40	89.70	6,936.9	-1,526.2	1,469.0	1,319,696.42	3,126,471.19	40.210070	-105.047191
9,065.0	87.70	89.60	6,941.0	-1,525.6	1,563.9	1,319,697.48	3,126,566.09	40.210072	-105.046851
9,159.0	88.20	89.30	6,944.3	-1,524.7	1,657.8	1,319,698.85	3,126,660.02	40.210074	-105.046514
9,254.0	87.40	88.60	6,948.0	-1,523.0	1,752.7	1,319,701.07	3,126,754.93	40.210079	-105.046175
9,349.0	88.50	89.10	6,951.4	-1,521.1	1,847.6	1,319,703.45	3,126,849.83	40.210084	-105.045835
9,444.0	88.00	88.30	6,954.3	-1,518.9	1,942.6	1,319,706.09	3,126,944.75	40.210090	-105.045495
9,539.0	89.10	87.30	6,956.7	-1,515.3	2,037.5	1,319,710.21	3,127,039.63	40.210100	-105.045155
9,633.0	89.60	86.80	6,957.7	-1,510.4	2,131.3	1,319,715.52	3,127,133.47	40.210113	-105.044819
9,728.0	91.20	88.10	6,957.1	-1,506.2	2,226.2	1,319,720.23	3,127,228.35	40.210125	-105.044479
9,823.0	90.70	89.40	6,955.5	-1,504.1	2,321.2	1,319,722.78	3,127,323.30	40.210131	-105.044139
9,918.0	91.60	90.00	6,953.6	-1,503.6	2,416.2	1,319,723.76	3,127,418.27	40.210132	-105.043799
10,012.0	91.60	89.20	6,951.0	-1,503.0	2,510.1	1,319,724.89	3,127,512.23	40.210134	-105.043463
10,106.0	91.30	90.80	6,948.6	-1,503.0	2,604.1	1,319,725.36	3,127,606.19	40.210134	-105.043126

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bohrer 2I-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 2I-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	91.30	90.60	6,946.5	-1,504.1	2,698.1	1,319,724.69	3,127,700.17	40.210131	-105.042790
10,295.0	91.10	88.90	6,944.5	-1,503.7	2,793.1	1,319,725.58	3,127,795.14	40.210132	-105.042450
10,389.0	91.00	90.20	6,942.8	-1,503.0	2,887.0	1,319,726.79	3,127,889.11	40.210134	-105.042113
10,484.0	90.90	90.30	6,941.2	-1,503.4	2,982.0	1,319,726.86	3,127,984.10	40.210133	-105.041773
10,578.0	90.70	89.10	6,939.9	-1,502.9	3,076.0	1,319,727.83	3,128,078.08	40.210134	-105.041437
10,673.0	90.70	89.90	6,938.7	-1,502.1	3,171.0	1,319,729.13	3,128,173.07	40.210136	-105.041097
10,767.0	90.60	89.60	6,937.6	-1,501.7	3,265.0	1,319,730.02	3,128,267.06	40.210137	-105.040760
10,862.0	91.60	89.70	6,935.8	-1,501.1	3,360.0	1,319,731.08	3,128,362.03	40.210139	-105.040420
10,956.0	91.00	89.60	6,933.7	-1,500.5	3,453.9	1,319,732.13	3,128,456.00	40.210140	-105.040083
11,051.0	91.30	89.80	6,931.8	-1,500.0	3,548.9	1,319,733.10	3,128,550.98	40.210142	-105.039743
11,145.0	90.70	89.30	6,930.1	-1,499.3	3,642.9	1,319,734.32	3,128,644.95	40.210144	-105.039407
11,240.0	92.20	88.40	6,927.7	-1,497.4	3,737.8	1,319,736.70	3,128,739.89	40.210149	-105.039067
11,333.0	93.10	87.60	6,923.4	-1,494.1	3,830.7	1,319,740.41	3,128,832.72	40.210158	-105.038734
11,427.0	93.90	87.40	6,917.7	-1,490.0	3,924.4	1,319,744.98	3,128,926.43	40.210169	-105.038399
11,450.0	94.20	87.30	6,916.1	-1,489.0	3,947.3	1,319,746.15	3,128,949.34	40.210172	-105.038317
Last CES Survey @ 11,450' MD									
11,500.0	94.20	87.30	6,912.4	-1,486.6	3,997.2	1,319,748.75	3,128,999.14	40.210178	-105.038138
PTB @ 11,500'									

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 2I-19H PBHL P2	0.00	0.00	6,955.0	-1,507.8	4,035.8	1,319,727.77	3,129,037.89	40.210120	-105.038000
- actual wellpath misses target center by 61.3ft at 11500.0ft MD (6912.4 TVD, -1486.6 N, 3997.2 E)									
- Point									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
11,450.0	6,916.1	-1,489.0	3,947.3	Last CES Survey @ 11,450' MD	
11,500.0	6,912.4	-1,486.6	3,997.2	PTB @ 11,500'	

Checked By: _____ Approved By: _____ Date: _____