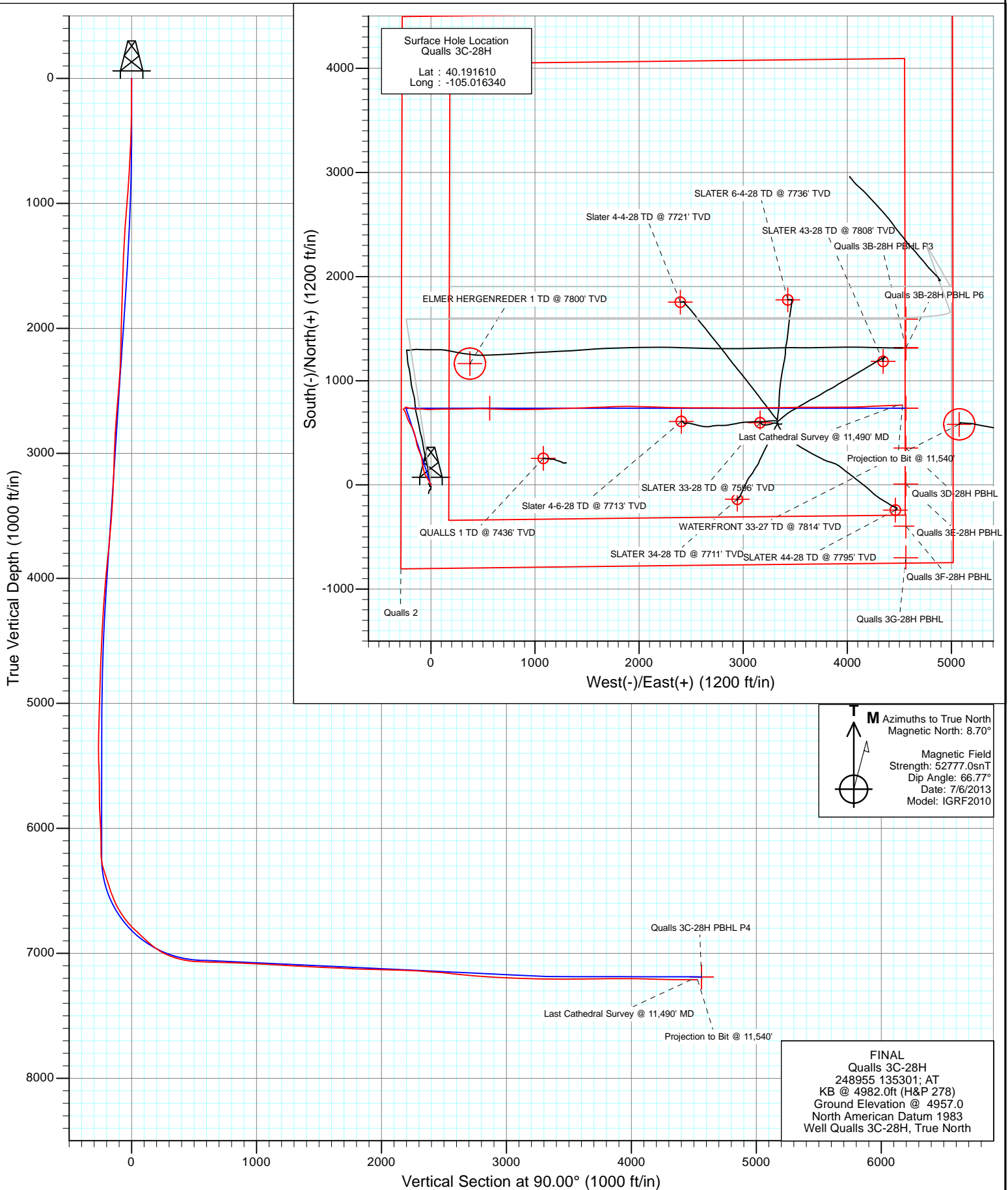


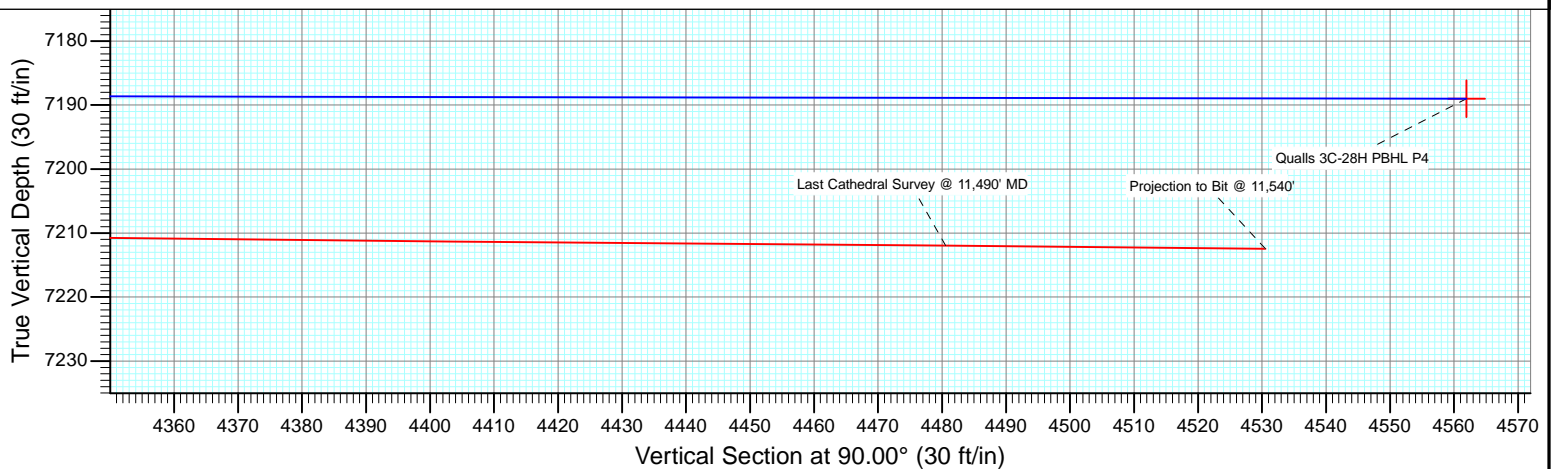
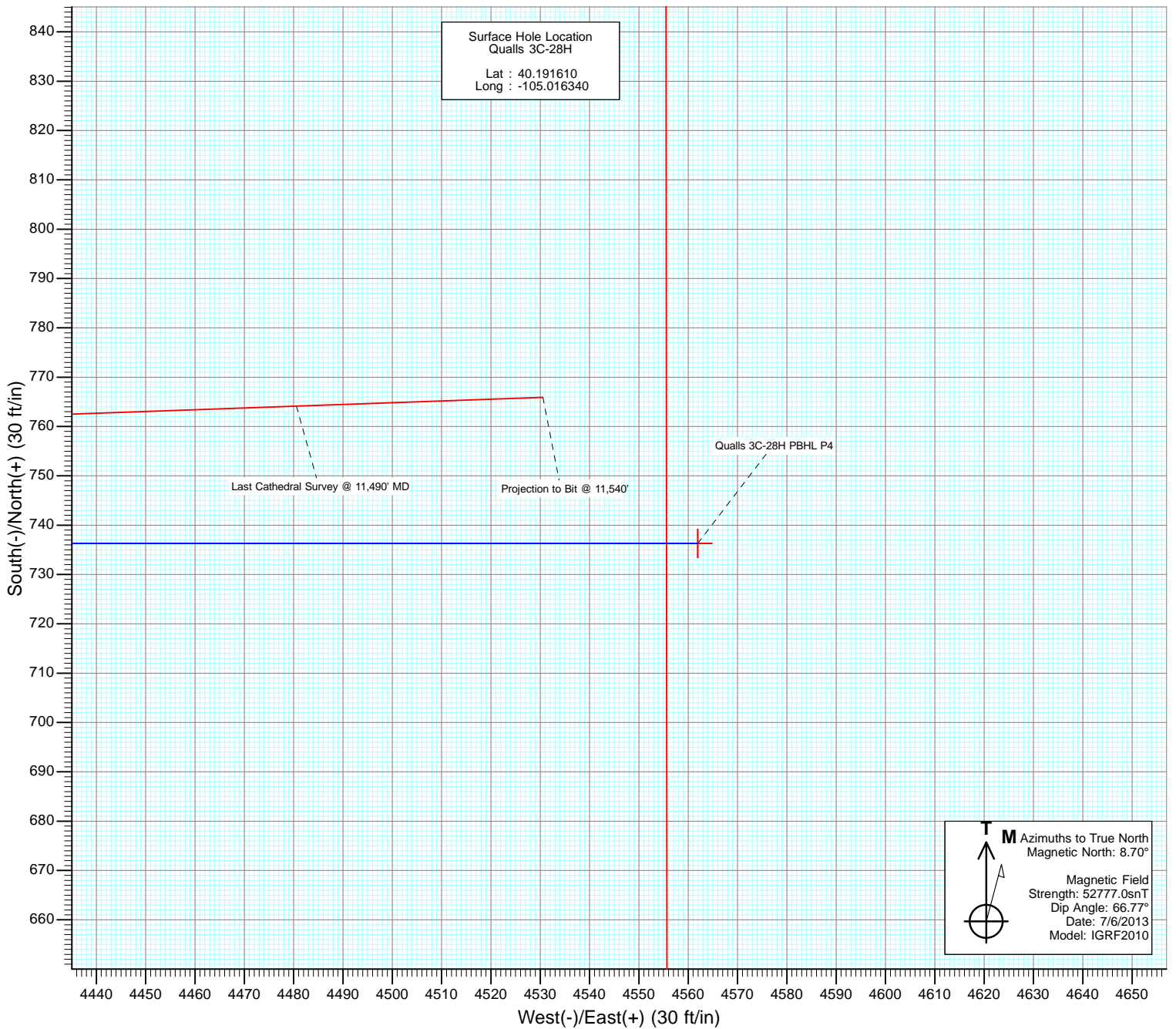


Project: DJ Wattenberg  
Site: S28-T3N-R68W (Qualls)  
Well: Qualls 3C-28H  
Wellbore: Hz  
Design: FINAL





Project: DJ Wattenberg  
Site: S28-T3N-R68W (Qualls)  
Well: Qualls 3C-28H  
Wellbore: Hz  
Design: FINAL



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Qualls 3C-28H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 4982.0ft (H&P 278)
<b>Site:</b>	S28-T3N-R68W (Qualls)	<b>MD Reference:</b>	KB @ 4982.0ft (H&P 278)
<b>Well:</b>	Qualls 3C-28H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

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

Site		S28-T3N-R68W (Qualls)			
Site Position:		Northing:	1,313,038.99 ft	Latitude:	40.191670
From:	Lat/Long	Easting:	3,135,104.30 ft	Longitude:	-105.016410
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.31 °

Well	Qualls 3C-28H					
Well Position	+N/-S	0.0 ft	Northing:	1,313,017.22 ft	Latitude:	40.191610
	+E/-W	0.0 ft	Easting:	3,135,123.98 ft	Longitude:	-105.016340
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,957.0 ft

<b>Wellbore</b>	Hz				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	IGRF2010	7/6/2013	(°)	(°)	(nT)
			8.70	66.77	52,777

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

<b>Survey Program</b>	<b>Date</b>	8/13/2013			
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
(ft)	(ft)				
143.0	11,540.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

<b>Survey</b>									
<b>Measured</b>	<b>Vertical</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Vertical</b>	<b>Dogleg</b>	<b>Build</b>	<b>Formations /</b>		
<b>Depth</b>	<b>Depth</b>	<b>(ft)</b>	<b>(ft)</b>	<b>Section</b>	<b>Rate</b>	<b>Rate</b>	<b>Comments</b>		
(ft)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)			
0.0	0.0	0.0	0.0	0.0	0.00	0.00			
143.0	0.50	350.90	143.0	0.6	-0.1	0.35	0.35		
174.0	0.60	344.50	174.0	0.9	-0.2	0.38	0.32		
205.0	1.00	344.40	205.0	1.3	-0.3	1.29	1.29		
235.0	1.30	341.00	235.0	1.9	-0.5	1.03	1.00		
327.0	2.30	331.50	326.9	4.5	-1.7	1.13	1.09		
419.0	3.40	331.80	418.8	8.5	-3.9	1.20	1.20		
511.0	4.40	331.80	510.6	14.0	-6.8	1.09	1.09		
603.0	5.70	332.80	602.3	21.2	-10.6	1.42	1.41		
695.0	6.90	331.50	693.7	30.1	-15.3	1.31	1.30		
787.0	7.60	331.80	785.0	40.4	-20.8	0.76	0.76		
904.0	8.40	330.80	900.8	54.6	-28.6	0.69	0.68		
996.0	8.40	327.50	991.8	66.2	-35.5	0.52	0.00		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Qualls 3C-28H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 4982.0ft (H&P 278)
<b>Site:</b>	S28-T3N-R68W (Qualls)	<b>MD Reference:</b>	KB @ 4982.0ft (H&P 278)
<b>Well:</b>	Qualls 3C-28H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	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
1,087.0	8.70	329.90	1,081.8	77.7	-42.5	-42.5	0.51	0.33	
1,179.0	8.80	326.30	1,172.8	89.6	-49.9	-49.9	0.61	0.11	
1,271.0	7.60	329.20	1,263.8	100.7	-57.0	-57.0	1.38	-1.30	
1,363.0	7.20	346.50	1,355.1	111.5	-61.4	-61.4	2.45	-0.43	
1,455.0	8.10	347.80	1,446.2	123.5	-64.1	-64.1	1.00	0.98	
1,549.0	8.80	341.20	1,539.2	136.7	-67.8	-67.8	1.27	0.74	
1,644.0	9.20	349.50	1,633.1	151.1	-71.6	-71.6	1.43	0.42	
1,738.0	9.00	351.10	1,725.9	165.7	-74.1	-74.1	0.34	-0.21	
1,833.0	9.30	348.10	1,819.7	180.6	-76.8	-76.8	0.59	0.32	
1,928.0	8.70	345.40	1,913.5	195.1	-80.2	-80.2	0.77	-0.63	
2,022.0	8.90	352.90	2,006.4	209.2	-82.9	-82.9	1.24	0.21	
2,117.0	10.50	355.00	2,100.0	225.1	-84.6	-84.6	1.72	1.68	
2,212.0	11.50	354.40	2,193.3	243.1	-86.2	-86.2	1.06	1.05	
2,306.0	12.90	348.00	2,285.2	262.7	-89.3	-89.3	2.07	1.49	
2,401.0	11.20	338.20	2,378.1	281.7	-95.0	-95.0	2.79	-1.79	
2,496.0	12.00	338.00	2,471.1	299.4	-102.1	-102.1	0.84	0.84	
2,590.0	12.20	337.10	2,563.0	317.6	-109.6	-109.6	0.29	0.21	
2,685.0	11.60	339.10	2,656.0	335.8	-116.9	-116.9	0.77	-0.63	
2,780.0	12.40	340.10	2,748.9	354.3	-123.8	-123.8	0.87	0.84	
2,874.0	12.10	343.70	2,840.8	373.2	-130.0	-130.0	0.87	-0.32	
2,969.0	11.80	349.40	2,933.7	392.3	-134.6	-134.6	1.28	-0.32	
3,063.0	10.00	344.90	3,026.0	409.7	-138.5	-138.5	2.12	-1.91	
3,158.0	10.20	348.60	3,119.6	425.9	-142.3	-142.3	0.71	0.21	
3,253.0	10.20	355.10	3,213.1	442.5	-144.7	-144.7	1.21	0.00	
3,347.0	10.10	344.10	3,305.6	458.7	-147.7	-147.7	2.06	-0.11	
3,442.0	12.20	342.10	3,398.8	476.3	-153.0	-153.0	2.25	2.21	
3,537.0	14.60	343.30	3,491.2	497.3	-159.5	-159.5	2.54	2.53	
3,631.0	15.50	342.20	3,582.0	520.6	-166.8	-166.8	1.00	0.96	
3,726.0	11.80	337.00	3,674.3	541.6	-174.5	-174.5	4.10	-3.89	
3,820.0	10.30	329.70	3,766.5	557.7	-182.5	-182.5	2.18	-1.60	
3,915.0	11.00	328.00	3,859.9	572.8	-191.6	-191.6	0.81	0.74	
4,010.0	11.20	329.10	3,953.1	588.4	-201.1	-201.1	0.31	0.21	
4,105.0	13.00	335.10	4,046.0	606.0	-210.3	-210.3	2.31	1.89	
4,199.0	10.60	334.90	4,138.0	623.4	-218.5	-218.5	2.55	-2.55	
4,294.0	8.70	337.60	4,231.7	638.0	-224.9	-224.9	2.06	-2.00	
4,388.0	8.70	344.10	4,324.6	651.4	-229.6	-229.6	1.05	0.00	
4,483.0	9.00	342.70	4,418.5	665.4	-233.7	-233.7	0.39	0.32	
4,577.0	8.40	339.40	4,511.4	678.8	-238.3	-238.3	0.83	-0.64	
4,672.0	6.90	339.00	4,605.5	690.6	-242.8	-242.8	1.58	-1.58	
4,767.0	5.50	332.70	4,700.0	700.0	-247.0	-247.0	1.64	-1.47	
4,861.0	4.70	330.80	4,793.6	707.4	-250.9	-250.9	0.87	-0.85	
4,956.0	3.40	327.70	4,888.4	713.2	-254.3	-254.3	1.39	-1.37	
5,051.0	2.80	329.30	4,983.2	717.5	-257.0	-257.0	0.64	-0.63	
5,145.0	2.30	321.60	5,077.1	721.0	-259.3	-259.3	0.64	-0.53	
5,240.0	1.80	291.40	5,172.1	723.0	-261.9	-261.9	1.23	-0.53	
5,334.0	1.40	332.80	5,266.0	724.6	-263.8	-263.8	1.27	-0.43	
5,429.0	1.50	345.10	5,361.0	726.8	-264.7	-264.7	0.34	0.11	
5,524.0	2.40	65.20	5,456.0	728.9	-263.2	-263.2	2.74	0.95	
5,619.0	2.20	73.60	5,550.9	730.2	-259.6	-259.6	0.41	-0.21	
5,713.0	0.90	52.30	5,644.9	731.2	-257.3	-257.3	1.49	-1.38	
5,807.0	1.40	334.90	5,738.8	732.7	-257.2	-257.2	1.59	0.53	
5,902.0	2.60	65.00	5,833.8	734.6	-255.7	-255.7	3.11	1.26	
5,996.0	4.90	57.70	5,927.6	737.7	-250.4	-250.4	2.49	2.45	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Qualls 3C-28H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 4982.0ft (H&P 278)
<b>Site:</b>	S28-T3N-R68W (Qualls)	<b>MD Reference:</b>	KB @ 4982.0ft (H&P 278)
<b>Well:</b>	Qualls 3C-28H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	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
6,091.0	2.70	38.70	6,022.4	741.6	-245.6	-245.6	2.64	-2.32	
6,185.0	1.40	5.80	6,116.3	744.5	-244.1	-244.1	1.81	-1.38	
6,217.0	1.20	350.90	6,148.3	745.2	-244.1	-244.1	1.22	-0.62	
6,248.0	1.20	344.40	6,179.3	745.8	-244.2	-244.2	0.44	0.00	
6,280.0	1.70	70.40	6,211.3	746.3	-243.9	-243.9	6.29	1.56	
6,312.0	6.20	101.60	6,243.2	746.1	-241.7	-241.7	15.08	14.06	
6,343.0	10.70	102.90	6,273.9	745.1	-237.3	-237.3	14.53	14.52	
6,375.0	14.20	104.90	6,305.1	743.4	-230.6	-230.6	11.02	10.94	
6,406.0	16.90	105.70	6,335.0	741.2	-222.6	-222.6	8.74	8.71	
6,438.0	18.50	103.70	6,365.5	738.8	-213.2	-213.2	5.35	5.00	
6,469.0	19.60	101.80	6,394.8	736.6	-203.3	-203.3	4.07	3.55	
6,501.0	19.70	99.90	6,424.9	734.5	-192.7	-192.7	2.02	0.31	
6,532.0	18.90	99.70	6,454.2	732.8	-182.6	-182.6	2.59	-2.58	
6,564.0	18.20	97.70	6,484.5	731.2	-172.6	-172.6	2.96	-2.19	
6,595.0	17.60	97.30	6,514.0	730.0	-163.1	-163.1	1.98	-1.94	
6,627.0	19.60	94.00	6,544.3	729.0	-153.0	-153.0	7.06	6.25	
6,658.0	23.80	90.50	6,573.1	728.6	-141.5	-141.5	14.17	13.55	
6,690.0	27.00	88.60	6,602.0	728.7	-127.8	-127.8	10.32	10.00	
6,721.0	28.00	89.00	6,629.5	729.0	-113.5	-113.5	3.28	3.23	
6,753.0	31.00	91.20	6,657.4	729.0	-97.8	-97.8	9.97	9.37	
6,785.0	33.50	93.90	6,684.4	728.2	-80.7	-80.7	9.02	7.81	
6,816.0	35.60	95.20	6,710.0	726.8	-63.2	-63.2	7.18	6.77	
6,848.0	37.70	93.60	6,735.6	725.3	-44.1	-44.1	7.21	6.56	
6,879.0	40.20	91.50	6,759.8	724.5	-24.7	-24.7	9.12	8.06	
6,911.0	43.30	88.70	6,783.6	724.5	-3.4	-3.4	11.30	9.69	
6,942.0	46.50	87.50	6,805.6	725.2	18.5	18.5	10.68	10.32	
6,974.0	47.50	87.50	6,827.4	726.2	41.9	41.9	3.12	3.12	
6,986.0	47.80	88.00	6,835.5	726.6	50.7	50.7	3.97	2.50	
7,056.0	47.80	89.20	6,882.5	727.8	102.6	102.6	1.27	0.00	
7,087.0	47.40	88.90	6,903.4	728.2	125.5	125.5	1.48	-1.29	
7,119.0	48.10	89.20	6,924.9	728.6	149.2	149.2	2.29	2.19	
7,151.0	51.60	89.60	6,945.6	728.9	173.6	173.6	10.98	10.94	
7,182.0	55.20	89.60	6,964.0	729.0	198.5	198.5	11.61	11.61	
7,214.0	58.50	90.40	6,981.5	729.0	225.3	225.3	10.52	10.31	
7,245.0	62.60	90.40	6,996.8	728.8	252.3	252.3	13.23	13.23	
7,277.0	65.40	90.40	7,010.8	728.6	281.0	281.0	8.75	8.75	
7,308.0	69.00	89.30	7,022.8	728.7	309.6	309.6	12.06	11.61	
7,340.0	72.70	87.60	7,033.3	729.5	339.8	339.8	12.60	11.56	
7,372.0	75.00	87.10	7,042.2	731.0	370.5	370.5	7.34	7.19	
7,403.0	76.80	87.90	7,049.8	732.3	400.5	400.5	6.32	5.81	
7,435.0	78.80	89.00	7,056.5	733.1	431.8	431.8	7.10	6.25	
7,466.0	82.40	89.80	7,061.6	733.4	462.4	462.4	11.89	11.61	
7,498.0	85.70	91.50	7,064.9	733.1	494.2	494.2	11.59	10.31	
7,529.0	87.90	92.60	7,066.6	732.0	525.1	525.1	7.93	7.10	
7,568.2	87.90	92.56	7,068.1	730.2	564.3	564.3	0.11	0.00	Plan @ 7057.0 (Qualls 3C-28H Hz Plan #5)
7,624.0	87.90	92.50	7,070.1	727.7	620.0	620.0	0.11	0.00	
7,719.0	88.40	90.80	7,073.2	725.0	714.9	714.9	1.86	0.53	
7,813.0	88.00	90.70	7,076.1	723.8	808.8	808.8	0.44	-0.43	
7,908.0	87.80	89.60	7,079.6	723.5	903.8	903.8	1.18	-0.21	
8,003.0	87.00	88.30	7,083.9	725.3	998.6	998.6	1.61	-0.84	
8,097.0	86.40	87.90	7,089.3	728.4	1,092.4	1,092.4	0.77	-0.64	
8,192.0	87.10	88.60	7,094.7	731.3	1,187.2	1,187.2	1.04	0.74	
8,287.0	87.10	88.80	7,099.5	733.4	1,282.1	1,282.1	0.21	0.00	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Qualls 3C-28H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 4982.0ft (H&P 278)
<b>Site:</b>	S28-T3N-R68W (Qualls)	<b>MD Reference:</b>	KB @ 4982.0ft (H&P 278)
<b>Well:</b>	Qualls 3C-28H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	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
8,381.0	86.60	87.50	7,104.7	736.5	1,375.9	1,375.9	1.48	-0.53	
8,476.0	87.30	88.10	7,109.7	740.1	1,470.7	1,470.7	0.97	0.74	
8,570.0	87.30	88.20	7,114.2	743.1	1,564.5	1,564.5	0.11	0.00	
8,665.0	87.20	88.00	7,118.7	746.3	1,659.4	1,659.4	0.24	-0.11	
8,760.0	87.20	86.90	7,123.4	750.5	1,754.2	1,754.2	1.16	0.00	
8,854.0	88.40	88.50	7,127.0	754.3	1,848.0	1,848.0	2.13	1.28	
8,949.0	89.00	91.00	7,129.1	754.7	1,943.0	1,943.0	2.71	0.63	
9,044.0	87.20	92.00	7,132.3	752.2	2,037.9	2,037.9	2.17	-1.89	
9,139.0	88.80	92.90	7,135.6	748.1	2,132.8	2,132.8	1.93	1.68	
9,233.0	88.30	91.50	7,138.0	744.5	2,226.6	2,226.6	1.58	-0.53	
9,328.0	85.30	90.60	7,143.3	742.8	2,321.5	2,321.5	3.30	-3.16	
9,422.0	86.00	90.90	7,150.4	741.6	2,415.2	2,415.2	0.81	0.74	
9,517.0	84.90	91.00	7,158.0	740.0	2,509.9	2,509.9	1.16	-1.16	
9,612.0	83.30	89.70	7,167.7	739.4	2,604.4	2,604.4	2.17	-1.68	
9,706.0	84.80	90.40	7,177.5	739.3	2,697.9	2,697.9	1.76	1.60	
9,801.0	86.50	90.40	7,184.7	738.7	2,792.6	2,792.6	1.79	1.79	
9,895.0	86.70	90.00	7,190.2	738.3	2,886.4	2,886.4	0.48	0.21	
9,990.0	87.20	89.90	7,195.3	738.4	2,981.3	2,981.3	0.54	0.53	
10,085.0	88.00	89.50	7,199.3	738.9	3,076.2	3,076.2	0.94	0.84	
10,179.0	88.10	89.00	7,202.5	740.2	3,170.1	3,170.1	0.54	0.11	
10,278.0	88.80	89.40	7,205.2	741.5	3,269.1	3,269.1	0.81	0.71	
10,372.0	89.30	89.40	7,206.7	742.5	3,363.1	3,363.1	0.53	0.53	
10,467.0	90.10	89.50	7,207.2	743.4	3,458.1	3,458.1	0.85	0.84	
10,562.0	90.20	89.60	7,207.0	744.2	3,553.1	3,553.1	0.15	0.11	
10,656.0	91.20	89.60	7,205.8	744.8	3,647.0	3,647.0	1.06	1.06	
10,751.0	90.90	90.10	7,204.1	745.1	3,742.0	3,742.0	0.61	-0.32	
10,845.0	90.20	89.20	7,203.2	745.7	3,836.0	3,836.0	1.21	-0.74	
10,940.0	89.70	90.30	7,203.2	746.1	3,931.0	3,931.0	1.27	-0.53	
11,035.0	89.80	89.30	7,203.7	746.4	4,026.0	4,026.0	1.06	0.11	
11,129.0	88.20	86.70	7,205.3	749.7	4,119.9	4,119.9	3.25	-1.70	
11,223.0	88.30	87.40	7,208.2	754.5	4,213.8	4,213.8	0.75	0.11	
11,318.0	89.10	88.20	7,210.3	758.2	4,308.7	4,308.7	1.19	0.84	
11,413.0	89.70	87.90	7,211.3	761.4	4,403.6	4,403.6	0.71	0.63	
11,490.0	89.40	88.00	7,211.9	764.1	4,480.6	4,480.6	0.41	-0.39	Last Cathedral Survey @ 11,490' MD
11,540.0	89.40	88.00	7,212.5	765.9	4,530.5	4,530.5	0.00	0.00	Projection to Bit @ 11,540' - Qualls 3C-28H PBH

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Qualls 3C-28H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 4982.0ft (H&P 278)
<b>Site:</b>	S28-T3N-R68W (Qualls)	<b>MD Reference:</b>	KB @ 4982.0ft (H&P 278)
<b>Well:</b>	Qualls 3C-28H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	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)		
Plan @ 7057.0 (Qualls 3	0.00	0.00	7,057.0	736.4	564.9	1,313,756.73	3,135,684.89	40.193632	-105.014318
- actual wellpath misses target center by 12.7ft at 7568.2ft MD (7068.1 TVD, 730.2 N, 564.3 E)									
- Point									
Qualls 3C-28H PBHL	0.00	0.00	7,057.0	736.3	4,561.9	1,313,778.38	3,139,681.82	40.193630	-105.000010
- actual wellpath misses target center by 161.3ft at 11540.0ft MD (7212.5 TVD, 765.9 N, 4530.5 E)									
- Point									
Qualls 3C-28H PBHL P4	0.00	0.00	7,189.0	736.3	4,561.9	1,313,778.38	3,139,681.82	40.193630	-105.000010
- actual wellpath misses target center by 49.1ft at 11540.0ft MD (7212.5 TVD, 765.9 N, 4530.5 E)									
- Point									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	Comment	
11,490.0	7,211.9	764.1	4,480.6	Last Cathedral Survey @ 11,490' MD	
11,540.0	7,212.5	765.9	4,530.5	Projection to Bit @ 11,540'	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_