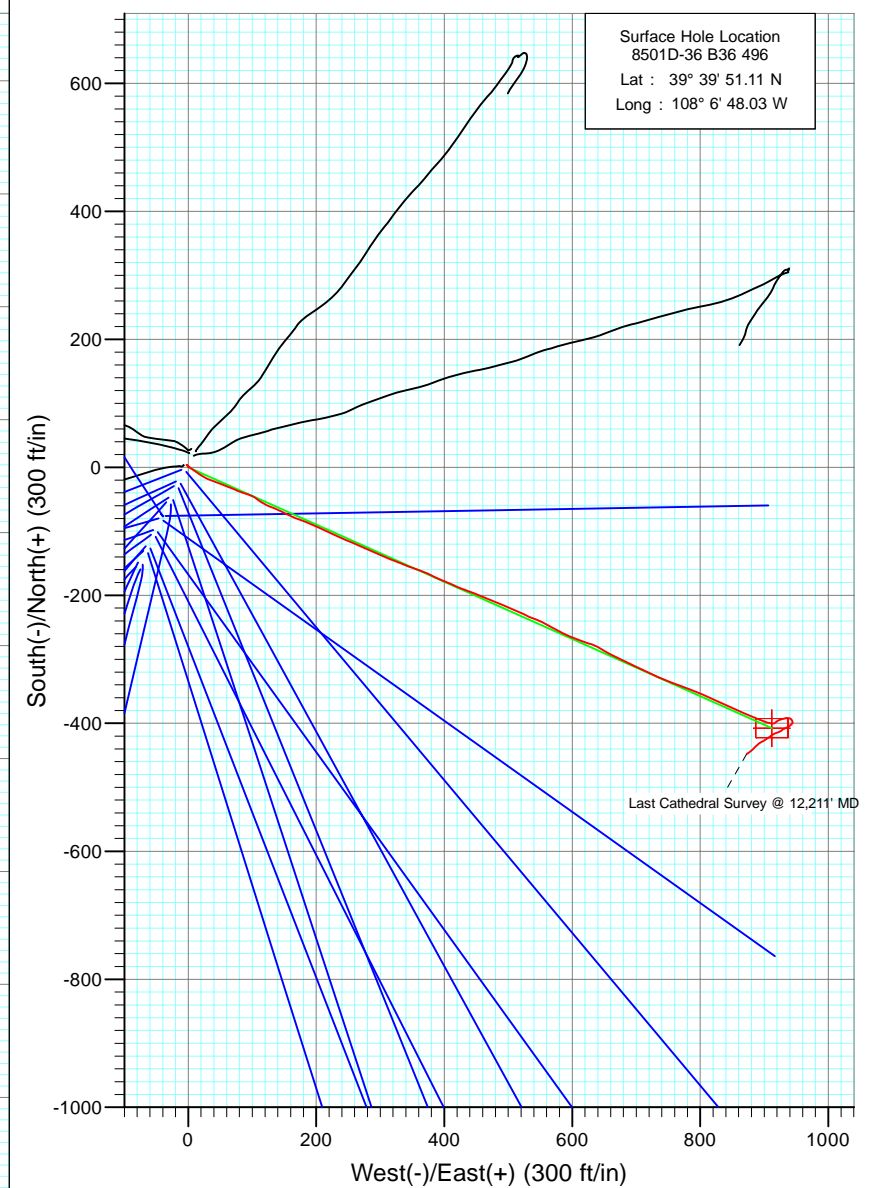
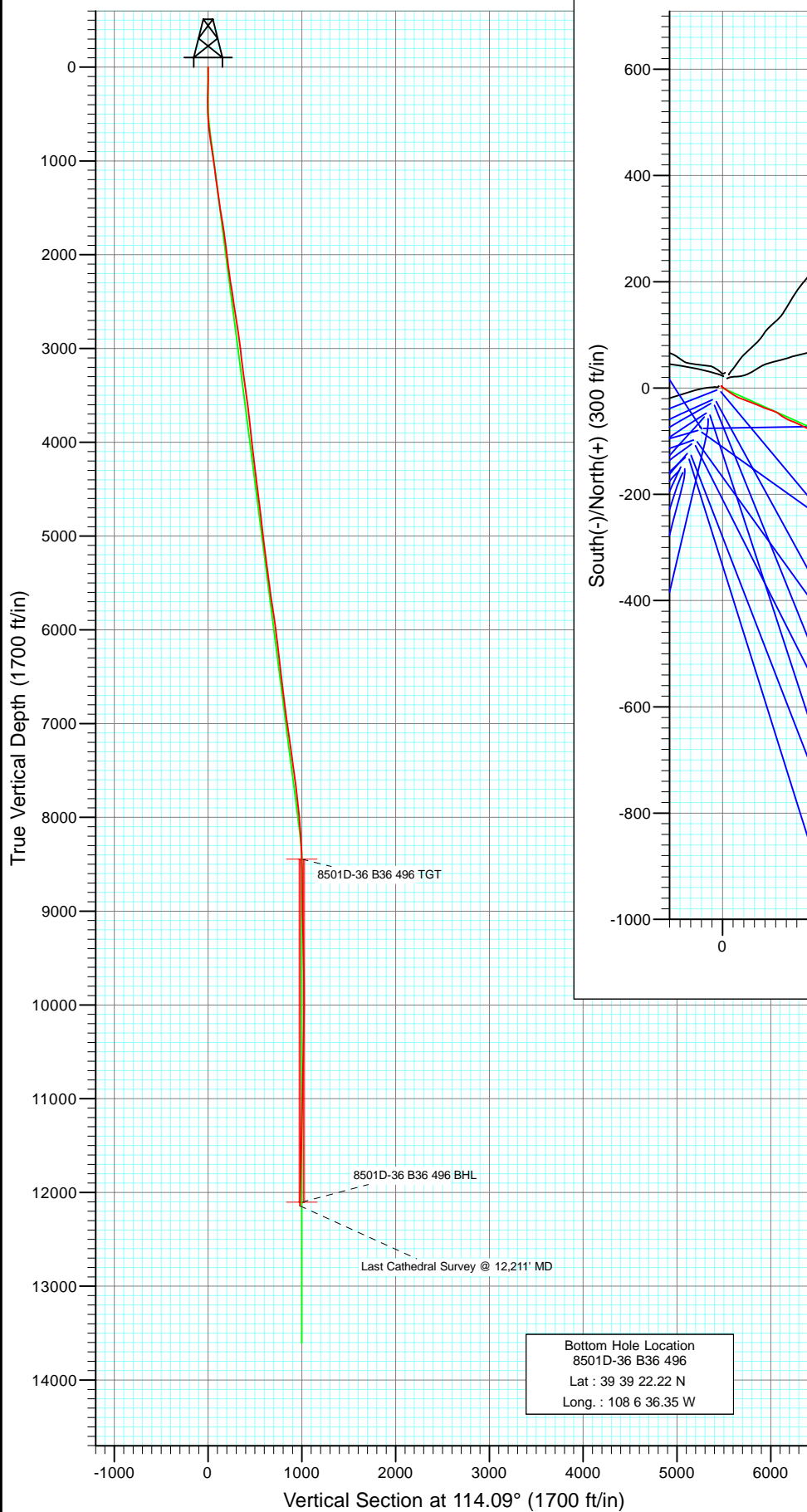




Project: Story Gulch  
Site: S36-T4S-R96W (B36 496)  
Well: 8501D-36 B36 496  
Wellbore: DD  
Design: Final Survey

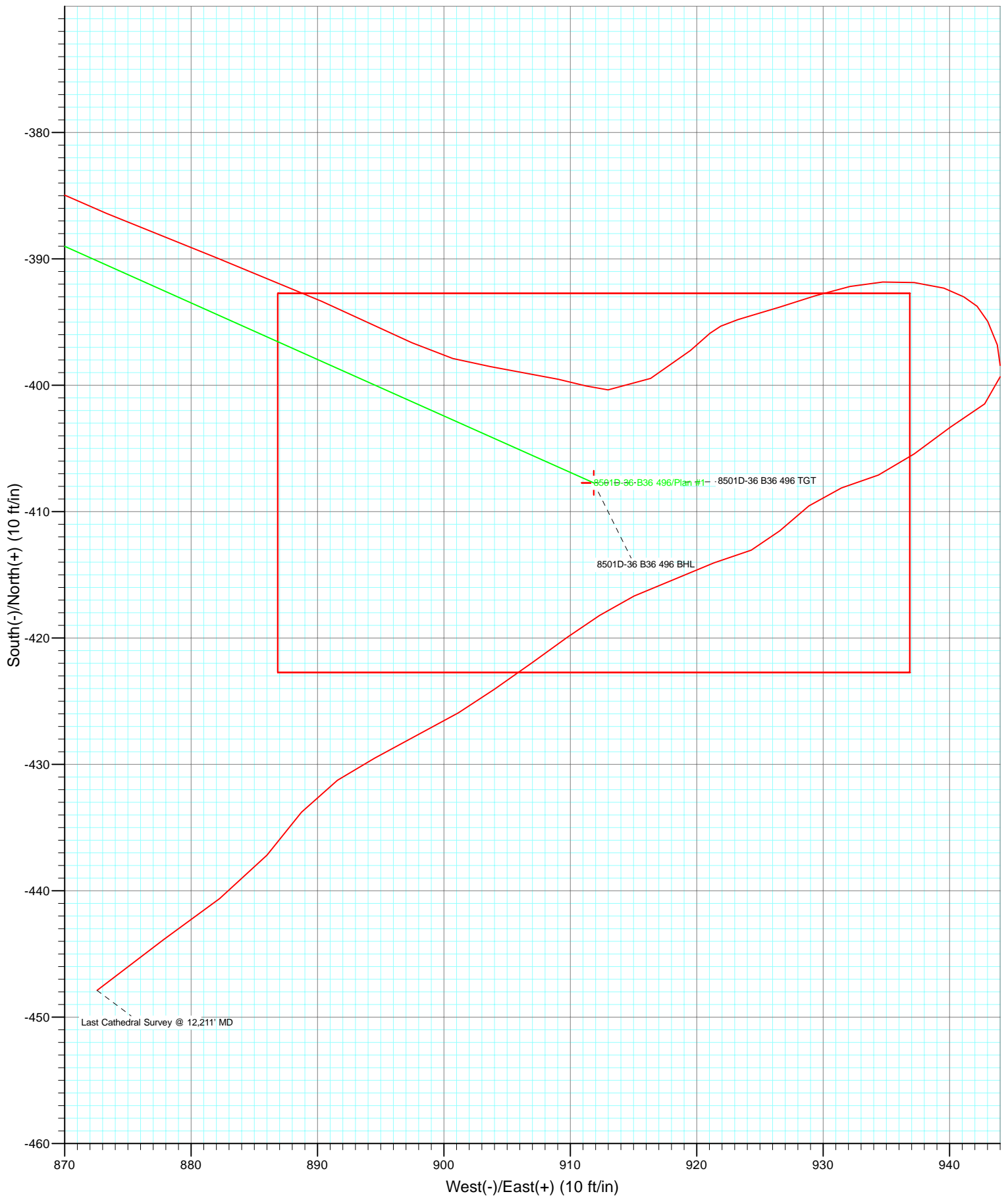


Azimuths to True North  
Magnetic North: 10.53°  
Magnetic Field  
Strength: 52433.2snT  
Dip Angle: 65.89°  
Date: 7/2/2010  
Model: IGRF200510

DESIGN DETAILS: DD  
105122, 105284; BH  
KBE @ 8374.0ft (Patterson 308)  
Target 8501D-36 B36 496 BHL  
Azimuth 14.09  
Origin Typ S Slot 0.0  
E/W from TVD 0.0 0.0



Project: Story Gulch  
Site: S36-T4S-R96W (B36 496)  
Well: 8501D-36 B36 496  
Wellbore: DD  
Design: DD



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8501D-36 B36 496
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KBE @ 8374.0ft (Patterson 308)
<b>Site:</b>	S36-T4S-R96W (B36 496)	<b>MD Reference:</b>	KBE @ 8374.0ft (Patterson 308)
<b>Well:</b>	8501D-36 B36 496	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB

<b>Project</b>	Story Gulch		
<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 Central Zone		

Site		S36-T4S-R96W (B36 496)			
Site Position:		Northing:	1,677,422.27 ft	Latitude:	39° 39' 51.36 N
From:	Lat/Long	Easting:	2,264,394.80 ft	Longitude:	108° 6' 47.88 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.65 °

Well	8501D-36 B36 496					
Well Position	+N/-S	0.0 ft	Northing:	1,677,397.29 ft	Latitude:	39° 39' 51.11 N
	+E/-W	0.0 ft	Easting:	2,264,382.14 ft	Longitude:	108° 6' 48.03 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,352.0 ft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	7/2/2010	10.52	65.89	52,433

<b>Design</b>	DD				
<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 (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	114.09	

<b>Survey Program</b>	<b>Date</b>	7/11/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
142.0	2,990.0	Survey #1 (DD)	MWD	Geolink MWD	
3,120.0	12,211.0	Survey #2 (DD)	MWD	Geolink MWD	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
142.0	1.10	354.10	142.0	1.4	-0.1	-0.7	0.77	0.77		
234.0	0.80	291.00	234.0	2.5	-0.8	-1.8	1.12	-0.33		
327.0	1.00	314.80	327.0	3.3	-2.0	-3.2	0.45	0.22		
358.0	1.00	301.00	358.0	3.6	-2.4	-3.7	0.78	0.00		
389.0	0.10	314.80	389.0	3.8	-2.7	-4.0	2.91	-2.90		
420.0	0.00	100.60	420.0	3.8	-2.7	-4.0	0.32	-0.32		
450.0	0.90	122.80	450.0	3.6	-2.5	-3.8	3.00	3.00		
481.0	1.80	141.70	481.0	3.1	-2.0	-3.1	3.20	2.90		
512.0	2.40	127.50	511.9	2.4	-1.2	-2.0	2.55	1.94		
543.0	3.80	123.80	542.9	1.4	0.2	-0.4	4.56	4.52		
604.0	5.10	124.80	603.7	-1.3	4.1	4.3	2.13	2.13		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8501D-36 B36 496
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KBE @ 8374.0ft (Patterson 308)
<b>Site:</b>	S36-T4S-R96W (B36 496)	<b>MD Reference:</b>	KBE @ 8374.0ft (Patterson 308)
<b>Well:</b>	8501D-36 B36 496	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	EDM 5000.1 US 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
696.0	7.70	127.50	695.1	-7.4	12.3	14.3	2.84	2.83	
791.0	8.40	119.40	789.2	-14.6	23.4	27.4	1.40	0.74	
887.0	8.40	110.60	884.2	-20.6	36.1	41.4	1.34	0.00	
982.0	8.80	110.30	978.1	-25.5	49.4	55.5	0.42	0.42	
1,077.0	7.80	112.30	1,072.1	-30.5	62.2	69.2	1.10	-1.05	
1,172.0	6.90	113.10	1,166.3	-35.2	73.4	81.4	0.95	-0.95	
1,267.0	8.60	108.80	1,260.4	-39.7	85.4	94.2	1.89	1.79	
1,362.0	6.50	109.40	1,354.6	-43.8	97.2	106.6	2.21	-2.21	
1,457.0	9.10	128.50	1,448.7	-50.2	108.1	119.2	3.83	2.74	
1,552.0	9.80	115.40	1,542.5	-58.4	121.3	134.6	2.37	0.74	
1,648.0	8.80	111.00	1,637.2	-64.5	135.6	150.1	1.28	-1.04	
1,743.0	8.60	117.80	1,731.1	-70.4	148.6	164.4	1.10	-0.21	
1,837.0	8.10	113.70	1,824.1	-76.4	160.9	178.1	0.83	-0.53	
1,932.0	7.50	110.30	1,918.2	-81.2	172.8	190.9	0.80	-0.63	
2,027.0	6.00	111.90	2,012.6	-85.2	183.3	202.1	1.59	-1.58	
2,123.0	6.80	113.90	2,108.0	-89.4	193.1	212.8	0.86	0.83	
2,218.0	8.40	115.60	2,202.1	-94.7	204.5	225.4	1.70	1.68	
2,313.0	9.40	114.70	2,296.0	-100.9	217.8	240.1	1.06	1.05	
2,408.0	8.00	113.70	2,389.9	-106.8	230.9	254.4	1.48	-1.47	
2,504.0	8.20	112.50	2,484.9	-112.1	243.4	267.9	0.27	0.21	
2,599.0	9.30	113.60	2,578.8	-117.8	256.7	282.4	1.17	1.16	
2,694.0	9.70	113.70	2,672.5	-124.1	271.0	298.1	0.42	0.42	
2,788.0	8.00	116.10	2,765.4	-130.1	284.2	312.5	1.85	-1.81	
2,883.0	7.70	113.50	2,859.5	-135.6	295.9	325.5	0.49	-0.32	
2,978.0	7.60	109.80	2,953.7	-140.3	307.7	338.1	0.53	-0.11	
2,990.0	7.40	111.60	2,965.6	-140.8	309.1	339.7	2.57	-1.67	Last Cathedral Survey @ 2990' MD
3,120.0	5.60	111.10	3,094.7	-146.2	322.8	354.4	1.39	-1.38	
3,212.0	8.00	113.70	3,186.1	-150.4	332.9	365.3	2.63	2.61	
3,304.0	7.80	110.30	3,277.2	-155.1	344.6	377.9	0.55	-0.22	
3,395.0	7.90	109.20	3,367.4	-159.3	356.3	390.3	0.20	0.11	
3,488.0	7.40	110.10	3,459.5	-163.5	368.0	402.6	0.55	-0.54	
3,579.0	7.30	119.10	3,549.8	-168.3	378.5	414.2	1.27	-0.11	
3,671.0	8.00	113.30	3,641.0	-173.7	389.5	426.5	1.13	0.76	
3,762.0	6.90	112.60	3,731.2	-178.3	400.4	438.3	1.21	-1.21	
3,854.0	6.20	113.90	3,822.6	-182.4	410.0	448.8	0.78	-0.76	
3,946.0	5.10	113.90	3,914.1	-186.1	418.3	457.8	1.20	-1.20	
4,038.0	6.10	111.40	4,005.7	-189.5	426.6	466.8	1.12	1.09	
4,129.0	5.80	110.20	4,096.2	-192.9	435.4	476.2	0.36	-0.33	
4,221.0	7.50	110.10	4,187.6	-196.5	445.4	486.8	1.85	1.85	
4,313.0	6.90	110.70	4,278.9	-200.5	456.2	498.3	0.66	-0.65	
4,405.0	8.20	115.10	4,370.1	-205.3	467.3	510.4	1.55	1.41	
4,496.0	7.50	111.20	4,460.2	-210.2	478.7	522.8	0.97	-0.77	
4,588.0	7.10	111.80	4,551.5	-214.5	489.6	534.5	0.44	-0.43	
4,680.0	6.40	115.10	4,642.8	-218.8	499.5	545.3	0.87	-0.76	
4,771.0	5.50	112.90	4,733.3	-222.6	508.2	554.8	1.02	-0.99	
4,863.0	7.20	113.10	4,824.8	-226.6	517.5	564.9	1.85	1.85	
4,955.0	6.00	115.80	4,916.2	-230.9	527.2	575.5	1.35	-1.30	
5,046.0	8.00	112.30	5,006.5	-235.4	537.3	586.6	2.25	2.20	
5,138.0	6.90	111.10	5,097.7	-239.8	548.4	598.5	1.21	-1.20	
5,230.0	7.90	121.10	5,188.9	-245.1	558.9	610.3	1.77	1.09	
5,322.0	7.30	117.10	5,280.1	-251.0	569.6	622.4	0.87	-0.65	
5,413.0	6.50	117.80	5,370.5	-256.0	579.3	633.3	0.88	-0.88	
5,505.0	7.40	116.80	5,461.8	-261.1	589.2	644.4	0.99	0.98	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8501D-36 B36 496
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KBE @ 8374.0ft (Patterson 308)
<b>Site:</b>	S36-T4S-R96W (B36 496)	<b>MD Reference:</b>	KBE @ 8374.0ft (Patterson 308)
<b>Well:</b>	8501D-36 B36 496	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	EDM 5000.1 US 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
5,597.0	8.50	111.30	5,552.9	-266.3	600.8	657.1	1.45	1.20	
5,688.0	8.00	109.40	5,643.0	-270.8	613.0	670.2	0.63	-0.55	
5,780.0	8.70	110.60	5,734.0	-275.4	625.6	683.5	0.78	0.76	
5,871.0	8.30	111.80	5,824.0	-280.3	638.1	696.9	0.48	-0.44	
5,963.0	8.00	124.80	5,915.1	-286.4	649.5	709.9	2.03	-0.33	
6,055.0	7.50	114.10	6,006.2	-292.5	660.3	722.2	1.66	-0.54	
6,146.0	6.60	118.90	6,096.5	-297.4	670.3	733.3	1.18	-0.99	
6,238.0	7.30	112.90	6,187.9	-302.3	680.3	744.4	1.10	0.76	
6,330.0	6.50	114.40	6,279.2	-306.7	690.4	755.5	0.89	-0.87	
6,422.0	6.90	117.00	6,370.6	-311.4	700.1	766.2	0.55	0.43	
6,513.0	6.20	117.70	6,461.0	-316.1	709.3	776.6	0.77	-0.77	
6,605.0	6.20	117.90	6,552.4	-320.8	718.1	786.5	0.02	0.00	
6,697.0	7.30	111.30	6,643.8	-325.2	727.9	797.3	1.46	1.20	
6,789.0	8.30	112.80	6,734.9	-329.9	739.5	809.7	1.11	1.09	
6,880.0	7.70	109.80	6,825.1	-334.5	751.3	822.4	0.80	-0.66	
6,972.0	6.80	114.30	6,916.3	-338.8	762.1	834.0	1.16	-0.98	
7,064.0	8.30	110.80	7,007.5	-343.4	773.2	846.1	1.70	1.63	
7,156.0	7.90	109.80	7,098.6	-347.9	785.4	859.0	0.46	-0.43	
7,247.0	7.20	109.00	7,188.8	-351.9	796.7	870.9	0.78	-0.77	
7,339.0	7.10	118.30	7,280.1	-356.5	807.1	882.3	1.26	-0.11	
7,430.0	8.20	113.10	7,370.3	-361.7	818.0	894.4	1.43	1.21	
7,522.0	8.00	113.20	7,461.4	-366.8	830.0	907.4	0.22	-0.22	
7,614.0	7.90	116.40	7,552.5	-372.1	841.5	920.1	0.49	-0.11	
7,706.0	7.50	113.80	7,643.7	-377.4	852.7	932.4	0.58	-0.43	
7,797.0	7.30	113.50	7,733.9	-382.1	863.4	944.1	0.22	-0.22	
7,889.0	6.20	113.60	7,825.3	-386.4	873.3	955.0	1.20	-1.20	
7,980.0	5.80	110.30	7,915.8	-390.0	882.1	964.5	0.58	-0.44	
8,072.0	5.30	114.80	8,007.3	-393.4	890.3	973.3	0.72	-0.54	
8,163.0	4.60	114.70	8,098.0	-396.6	897.5	981.2	0.77	-0.77	
8,255.0	3.60	96.80	8,189.8	-398.5	903.7	987.6	1.75	-1.09	
8,347.0	3.20	104.80	8,281.6	-399.5	909.0	992.9	0.67	-0.43	
8,438.0	1.90	97.60	8,372.5	-400.4	913.0	996.9	1.47	-1.43	
8,530.0	2.70	58.90	8,464.4	-399.5	916.4	999.6	1.85	0.87	
8,622.0	2.10	49.90	8,556.4	-397.2	919.5	1,001.6	0.77	-0.65	
8,713.0	0.50	43.20	8,647.3	-395.9	921.1	1,002.4	1.76	-1.76	
8,805.0	0.80	65.30	8,739.3	-395.3	921.9	1,003.0	0.42	0.33	
8,897.0	1.00	71.80	8,831.3	-394.8	923.3	1,004.0	0.24	0.22	
8,987.0	0.70	76.10	8,921.3	-394.4	924.5	1,005.0	0.34	-0.33	
9,078.0	1.90	72.40	9,012.3	-393.8	926.5	1,006.6	1.32	1.32	
9,170.0	1.80	72.20	9,104.2	-392.9	929.3	1,008.8	0.11	-0.11	
9,262.0	1.80	77.90	9,196.2	-392.2	932.1	1,011.0	0.19	0.00	
9,353.0	1.50	87.20	9,287.2	-391.8	934.7	1,013.2	0.44	-0.33	
9,445.0	1.60	94.80	9,379.1	-391.9	937.2	1,015.5	0.25	0.11	
9,537.0	1.40	106.90	9,471.1	-392.3	939.6	1,017.9	0.41	-0.22	
9,628.0	0.80	125.10	9,562.1	-393.0	941.1	1,019.6	0.76	-0.66	
9,720.0	0.80	125.80	9,654.1	-393.7	942.2	1,020.8	0.01	0.00	
9,812.0	1.10	158.60	9,746.1	-394.9	943.0	1,022.1	0.66	0.33	
9,904.0	1.40	157.00	9,838.0	-396.8	943.8	1,023.6	0.33	0.33	
9,995.0	1.70	185.20	9,929.0	-399.2	944.1	1,024.8	0.89	0.33	
10,087.0	1.90	231.60	10,021.0	-401.5	942.8	1,024.5	1.55	0.22	
10,178.0	2.30	239.40	10,111.9	-403.3	940.0	1,022.8	0.54	0.44	
10,270.0	2.10	226.90	10,203.8	-405.4	937.2	1,021.1	0.56	-0.22	
10,362.0	2.10	252.20	10,295.8	-407.1	934.4	1,019.2	1.00	0.00	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8501D-36 B36 496
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KBE @ 8374.0ft (Patterson 308)
<b>Site:</b>	S36-T4S-R96W (B36 496)	<b>MD Reference:</b>	KBE @ 8374.0ft (Patterson 308)
<b>Well:</b>	8501D-36 B36 496	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	EDM 5000.1 US 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
10,453.0	1.80	248.80	10,386.7	-408.1	931.5	1,016.9	0.35	-0.33	
10,545.0	1.90	234.10	10,478.7	-409.5	928.9	1,015.1	0.53	0.11	
10,637.0	1.90	224.70	10,570.6	-411.5	926.6	1,013.8	0.34	0.00	
10,728.0	1.60	249.40	10,661.6	-413.0	924.3	1,012.4	0.88	-0.33	
10,820.0	2.30	252.20	10,753.5	-414.1	921.4	1,010.1	0.77	0.76	
11,003.0	2.00	241.80	10,936.4	-416.7	915.0	1,005.4	0.27	-0.16	
11,095.0	1.90	239.70	11,028.3	-418.2	912.3	1,003.6	0.13	-0.11	
11,187.0	1.90	231.90	11,120.3	-419.9	909.8	1,002.0	0.28	0.00	
11,278.0	2.40	236.10	11,211.2	-421.9	907.0	1,000.2	0.58	0.55	
11,370.0	2.20	233.60	11,303.2	-424.0	904.0	998.4	0.24	-0.22	
11,461.0	2.10	240.10	11,394.1	-425.9	901.2	996.5	0.29	-0.11	
11,553.0	2.60	242.60	11,486.0	-427.7	897.8	994.2	0.55	0.54	
11,645.0	2.10	240.40	11,577.9	-429.5	894.5	991.9	0.55	-0.54	
11,736.0	2.20	238.00	11,668.9	-431.3	891.6	990.0	0.15	0.11	
11,828.0	2.60	220.10	11,760.8	-433.8	888.7	988.4	0.92	0.43	
11,919.0	2.90	217.80	11,851.7	-437.2	886.0	987.3	0.35	0.33	
12,011.0	3.50	235.50	11,943.5	-440.6	882.3	985.3	1.25	0.65	
12,103.0	3.40	231.90	12,035.4	-443.9	877.8	982.5	0.26	-0.11	
12,211.0	3.60	233.50	12,143.2	-447.9	872.6	979.4	0.21	0.19	Last Cathedral Survey @ 12,211' MD

### 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									
8501D-36 B36 496 TGT	0.00	0.00	8,444.0	-407.7	911.9	1,676,963.50	2,265,281.90	39° 39' 47.08 N	108° 6' 36.37 W
- actual wellpath misses target center by 8.7ft at 8509.3ft MD (8443.8 TVD, -399.9 N, 915.5 E)									
- Point									
8501D-36 B36 496 BHL	0.00	0.00	12,104.0	-407.7	911.9	1,676,963.50	2,265,281.90	39° 39' 47.08 N	108° 6' 36.37 W
- actual wellpath misses target center by 53.7ft at 12168.5ft MD (12100.8 TVD, -446.3 N, 874.7 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									

### Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,990.0	2,965.6	-140.8	309.1	Last Cathedral Survey @ 2990' MD
12,211.0	12,143.2	-447.9	872.6	Last Cathedral Survey @ 12,211' MD

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