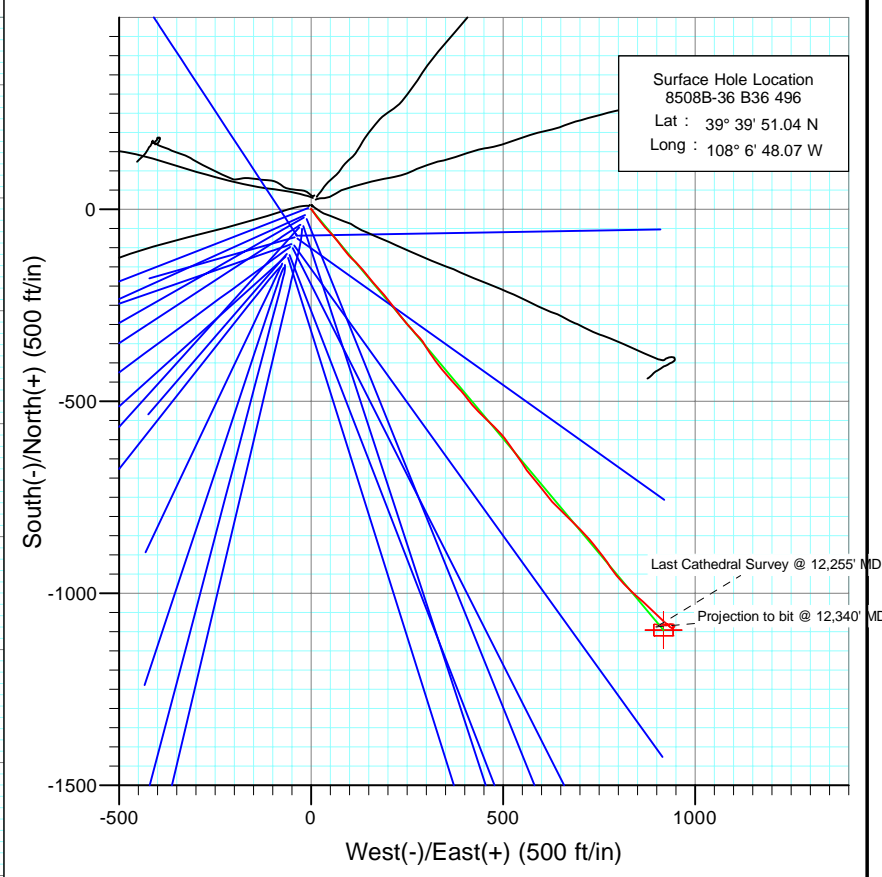
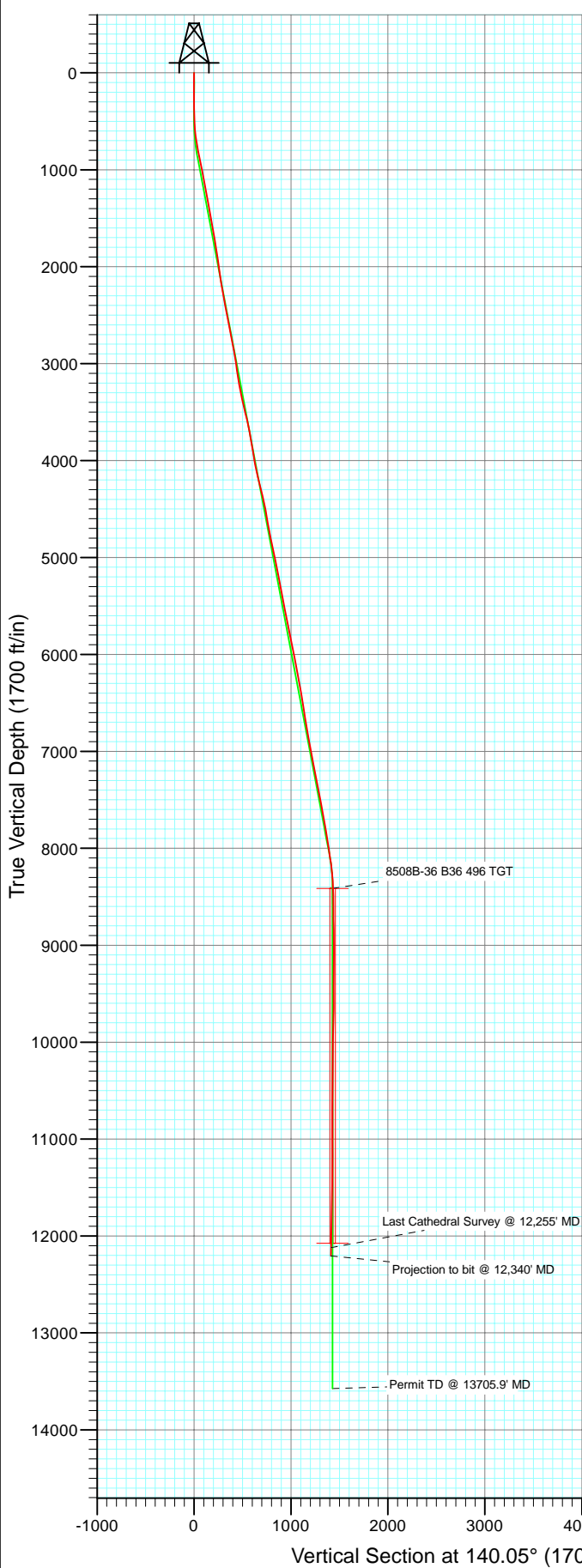




Project: Story Gulch  
 Site: S36-T4S-R96W (B36 496)  
 Well: 8508B-36 B36 496  
 Wellbore: Final  
 Design: DD



Azimuths to True North  
 Magnetic North: 10.52°

Magnetic Field  
 Strength: 52431.6snT  
 Dip Angle: 65.89°  
 Date: 7/8/2010  
 Model: IGRF200510

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DD  
 Job # 105293

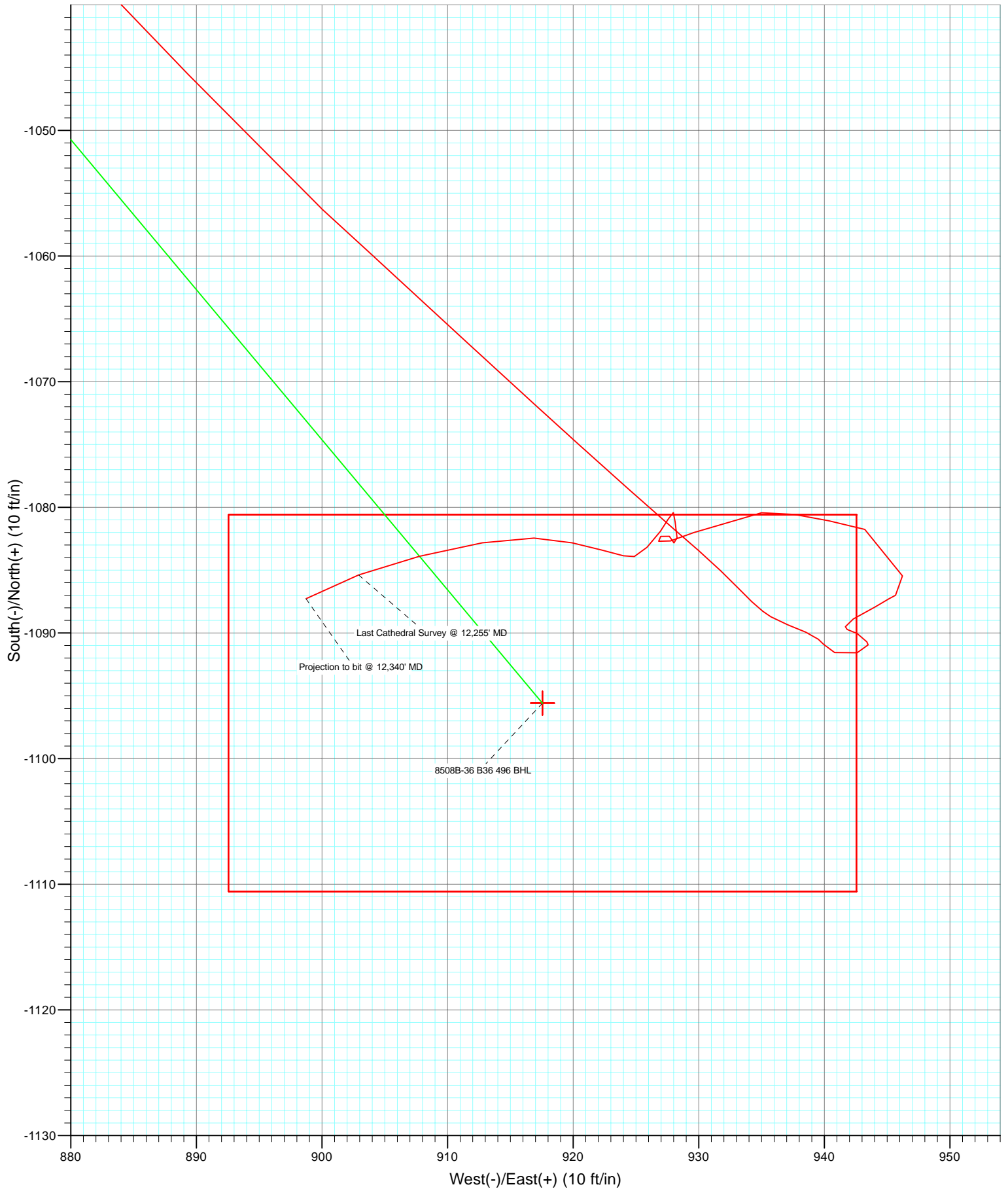
KBE @ 8374.0ft (Patterson 308)  
 North American Datum 1983  
 Well 8508B-36 B36 496, True North

Target	Azimuth	Origin Type	N/S	E/W
8508B-36 B36 496 BHL	140.05	Slot	0.0	0.0

TVD	Latitude	Longitude
12074.0	39° 39' 40.29 N	108° 6' 36.58 W



Project: Story Gulch  
Site: S36-T4S-R96W (B36 496)  
Well: 8508B-36 B36 496  
Wellbore: Final  
Design: DD



# Cathedral Energy Services

## Survey Report

<b>Company:</b> EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b> Well 8508B-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> 8508B-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		

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

<b>Well</b> 8508B-36 B36 496					
<b>Well Position</b>	<b>+N/-S</b> 0.0 ft	<b>Northing:</b> 1,677,390.12 ft	<b>Latitude:</b> 39° 39' 51.04 N		
	<b>+E/-W</b> 0.0 ft	<b>Easting:</b> 2,264,378.60 ft	<b>Longitude:</b> 108° 6' 48.07 W		
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 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	7/8/2010	10.52	65.89	52,432

<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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	140.05	

<b>Survey Program</b>		<b>Date</b> 7/20/2010
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>
170.0	2,970.0	Survey #1 (DD)
3,085.0	12,340.0	Survey #2 (DD)
		<b>Tool Name</b>
		MWD
		MWD
		<b>Description</b>
		Geolink MWD
		Geolink MWD

<b>Survey</b>									
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	
170.0	0.50	346.80	170.0	0.7	-0.2	-0.7	0.29	0.29	
232.0	0.30	107.90	232.0	0.9	-0.1	-0.8	1.13	-0.32	
293.0	1.00	127.30	293.0	0.6	0.5	-0.1	1.19	1.15	
355.0	1.00	144.70	355.0	-0.2	1.2	1.0	0.49	0.00	
417.0	1.10	150.60	417.0	-1.2	1.8	2.1	0.24	0.16	
447.0	1.20	150.60	447.0	-1.7	2.1	2.7	0.33	0.33	
478.0	1.90	147.40	478.0	-2.4	2.6	3.5	2.27	2.26	
509.0	2.40	146.40	508.9	-3.4	3.2	4.7	1.62	1.61	
540.0	3.40	141.50	539.9	-4.6	4.1	6.2	3.32	3.23	
570.0	4.30	146.00	569.8	-6.3	5.3	8.2	3.16	3.00	
601.0	5.40	143.50	600.7	-8.4	6.8	10.8	3.61	3.55	

# Cathedral Energy Services

## Survey Report

<b>Company:</b> EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b> Well 8508B-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> 8508B-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
632.0	6.40	144.90	631.5	-11.0	8.7	14.0	3.26	3.23	
663.0	7.50	144.30	662.3	-14.0	10.9	17.8	3.56	3.55	
694.0	8.30	144.90	693.0	-17.5	13.3	22.0	2.59	2.58	
789.0	10.90	142.00	786.7	-30.2	22.8	37.8	2.78	2.74	
881.0	11.80	139.00	876.9	-44.2	34.4	55.9	1.17	0.98	
972.0	11.60	136.80	966.0	-57.9	46.7	74.4	0.54	-0.22	
1,064.0	11.10	138.40	1,056.2	-71.2	58.9	92.4	0.64	-0.54	
1,156.0	10.20	141.00	1,146.6	-84.2	69.9	109.4	1.11	-0.98	
1,247.0	9.30	144.80	1,236.3	-96.4	79.2	124.8	1.22	-0.99	
1,339.0	10.50	142.30	1,326.9	-109.2	88.7	140.6	1.39	1.30	
1,431.0	11.40	136.80	1,417.3	-122.4	100.0	158.1	1.50	0.98	
1,522.0	11.60	131.50	1,506.4	-135.0	113.0	176.1	1.18	0.22	
1,614.0	9.60	137.30	1,596.9	-146.8	125.1	192.9	2.46	-2.17	
1,705.0	9.00	142.80	1,686.7	-158.0	134.6	207.6	1.18	-0.66	
1,797.0	8.40	140.30	1,777.6	-169.0	143.2	221.5	0.77	-0.65	
1,889.0	8.40	139.10	1,868.6	-179.2	151.9	234.9	0.19	0.00	
1,981.0	8.40	140.00	1,959.6	-189.4	160.7	248.4	0.14	0.00	
2,072.0	8.80	139.40	2,049.6	-199.8	169.5	262.0	0.45	0.44	
2,164.0	8.60	139.00	2,140.6	-210.3	178.5	275.9	0.23	-0.22	
2,256.0	9.60	136.90	2,231.4	-221.1	188.3	290.4	1.15	1.09	
2,347.0	11.20	141.50	2,320.9	-233.6	199.0	306.8	1.98	1.76	
2,439.0	11.30	144.60	2,411.1	-247.9	209.8	324.8	0.67	0.11	
2,531.0	11.10	141.90	2,501.4	-262.2	220.5	342.6	0.61	-0.22	
2,622.0	10.70	141.50	2,590.7	-275.8	231.1	359.8	0.45	-0.44	
2,714.0	10.70	141.30	2,681.1	-289.1	241.8	376.9	0.04	0.00	
2,806.0	10.70	139.00	2,771.5	-302.2	252.7	394.0	0.46	0.00	
2,897.0	10.00	137.30	2,861.1	-314.4	263.6	410.3	0.84	-0.77	
2,970.0	9.40	137.00	2,933.0	-323.4	272.0	422.6	0.82	-0.82	
3,085.0	8.20	137.10	3,046.7	-336.3	284.0	440.1	1.04	-1.04	
3,176.0	8.00	149.20	3,136.8	-346.5	291.6	452.9	1.88	-0.22	
3,268.0	11.00	146.50	3,227.5	-359.3	299.8	467.9	3.30	3.26	
3,360.0	10.90	148.00	3,317.8	-374.0	309.2	485.3	0.33	-0.11	
3,452.0	13.50	145.50	3,407.7	-390.2	319.9	504.6	2.88	2.83	
3,543.0	14.00	139.60	3,496.1	-407.4	333.1	526.2	1.64	0.55	
3,635.0	13.30	140.70	3,585.5	-424.0	347.0	547.9	0.81	-0.76	
3,727.0	10.70	138.40	3,675.5	-438.6	359.3	567.0	2.87	-2.83	
3,818.0	9.40	138.80	3,765.1	-450.5	369.9	582.9	1.43	-1.43	
3,910.0	11.00	139.00	3,855.6	-462.8	380.6	599.1	1.74	1.74	
4,002.0	8.30	132.70	3,946.3	-473.9	391.2	614.5	3.15	-2.93	
4,094.0	10.40	144.30	4,037.1	-485.2	400.9	629.4	3.06	2.28	
4,185.0	13.40	142.90	4,126.2	-500.3	412.1	648.1	3.31	3.30	
4,277.0	14.40	135.80	4,215.5	-517.0	426.5	670.2	2.15	1.09	
4,369.0	13.70	134.20	4,304.7	-532.8	442.3	692.4	0.87	-0.76	
4,460.0	12.60	134.90	4,393.3	-547.3	457.0	713.0	1.22	-1.21	
4,552.0	11.10	135.00	4,483.4	-560.6	470.4	731.8	1.63	-1.63	
4,644.0	9.10	131.70	4,573.9	-571.7	482.1	747.9	2.26	-2.17	
4,736.0	11.30	140.50	4,664.5	-583.5	493.3	764.1	2.92	2.39	
4,827.0	10.50	141.20	4,753.8	-596.9	504.1	781.3	0.89	-0.88	
4,919.0	12.50	144.90	4,844.0	-611.5	515.1	799.6	2.32	2.17	
5,011.0	11.70	144.30	4,933.9	-627.3	526.3	818.8	0.88	-0.87	
5,102.0	10.40	146.80	5,023.3	-641.6	536.2	836.2	1.52	-1.43	
5,194.0	12.00	144.20	5,113.5	-656.3	546.3	853.9	1.82	1.74	
5,286.0	11.10	148.20	5,203.6	-671.6	556.6	872.3	1.31	-0.98	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8508B-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>MVD Reference:</b>	KBE @ 8374.0ft (Patterson 308)
<b>Well:</b>	8508B-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
5,383.0	12.00	140.40	5,298.7	-687.3	567.9	891.6	1.86	0.93	
5,474.0	11.00	140.70	5,387.8	-701.3	579.4	909.7	1.10	-1.10	
5,566.0	9.80	140.20	5,478.3	-714.1	590.0	926.3	1.31	-1.30	
5,657.0	11.50	142.60	5,567.8	-727.3	600.5	943.1	1.93	1.87	
5,749.0	10.10	141.00	5,658.1	-740.9	611.1	960.4	1.56	-1.52	
5,841.0	11.70	142.20	5,748.5	-754.5	621.9	977.8	1.76	1.74	
5,932.0	12.80	135.30	5,837.4	-769.0	634.7	997.0	2.01	1.21	
6,024.0	11.30	132.70	5,927.4	-782.3	648.5	1,016.1	1.73	-1.63	
6,116.0	11.10	135.40	6,017.6	-794.7	661.3	1,033.9	0.61	-0.22	
6,207.0	9.60	132.40	6,107.1	-806.1	673.1	1,050.1	1.75	-1.65	
6,299.0	11.00	136.10	6,197.7	-817.6	684.8	1,066.5	1.68	1.52	
6,391.0	11.70	136.60	6,287.9	-830.7	697.3	1,084.6	0.77	0.76	
6,574.0	8.60	136.50	6,468.0	-854.1	719.5	1,116.8	1.69	-1.69	
6,666.0	9.40	141.80	6,558.8	-865.0	728.9	1,131.1	1.25	0.87	
6,758.0	8.00	138.20	6,649.8	-875.7	737.8	1,145.0	1.63	-1.52	
6,845.0	8.90	142.00	6,735.8	-885.5	746.0	1,157.8	1.22	1.03	
6,936.0	11.00	144.40	6,825.5	-898.1	755.3	1,173.5	2.35	2.31	
7,028.0	10.90	141.80	6,915.8	-912.1	765.8	1,191.0	0.55	-0.11	
7,120.0	9.40	146.90	7,006.3	-925.2	775.3	1,207.1	1.90	-1.63	
7,211.0	11.30	144.30	7,095.9	-938.7	784.6	1,223.4	2.15	2.09	
7,303.0	10.90	145.20	7,186.1	-953.1	794.8	1,241.0	0.47	-0.43	
7,395.0	12.40	135.50	7,276.3	-967.3	806.7	1,259.5	2.68	1.63	
7,487.0	11.50	132.60	7,366.3	-980.6	820.4	1,278.5	1.18	-0.98	
7,578.0	10.60	134.70	7,455.6	-992.6	833.0	1,295.8	1.08	-0.99	
7,670.0	10.50	135.60	7,546.0	-1,004.5	844.9	1,312.6	0.21	-0.11	
7,761.0	9.80	131.00	7,635.6	-1,015.5	856.5	1,328.5	1.18	-0.77	
7,853.0	9.60	130.80	7,726.3	-1,025.7	868.2	1,343.8	0.22	-0.22	
7,944.0	8.50	132.20	7,816.1	-1,035.2	879.0	1,358.0	1.23	-1.21	
8,036.0	9.90	137.30	7,907.0	-1,045.6	889.4	1,372.6	1.76	1.52	
8,127.0	9.30	132.90	7,996.7	-1,056.3	900.1	1,387.7	1.04	-0.66	
8,219.0	8.80	132.30	8,087.5	-1,066.1	910.7	1,402.1	0.55	-0.54	
8,311.0	7.30	132.50	8,178.6	-1,074.8	920.2	1,414.8	1.63	-1.63	
8,402.0	5.60	130.50	8,269.0	-1,081.6	927.9	1,424.9	1.88	-1.87	
8,494.0	3.30	136.00	8,360.8	-1,086.4	933.1	1,432.0	2.54	-2.50	
8,586.0	1.10	116.90	8,452.7	-1,088.7	935.7	1,435.5	2.49	-2.39	
8,677.0	0.80	113.60	8,543.7	-1,089.4	937.1	1,436.8	0.33	-0.33	
8,769.0	1.10	111.20	8,635.7	-1,089.9	938.5	1,438.2	0.33	0.33	
8,860.0	0.40	142.70	8,726.7	-1,090.5	939.5	1,439.3	0.87	-0.77	
8,952.0	1.70	126.00	8,818.6	-1,091.6	940.8	1,440.9	1.44	1.41	
9,044.0	1.30	41.30	8,910.6	-1,091.6	942.6	1,442.1	2.22	-0.43	
9,136.0	0.30	129.30	9,002.6	-1,090.9	943.5	1,442.2	1.44	-1.09	
9,227.0	0.60	324.30	9,093.6	-1,090.7	943.4	1,441.9	0.98	0.33	
9,319.0	0.70	299.00	9,185.6	-1,090.0	942.6	1,440.9	0.33	0.11	
9,411.0	0.40	280.60	9,277.6	-1,089.7	941.8	1,440.1	0.37	-0.33	
9,502.0	0.30	48.60	9,368.6	-1,089.5	941.7	1,439.9	0.69	-0.11	
9,594.0	0.80	44.70	9,460.6	-1,088.9	942.3	1,439.8	0.54	0.54	
9,686.0	1.70	69.00	9,552.6	-1,087.9	944.0	1,440.2	1.11	0.98	
9,740.0	1.10	44.80	9,606.6	-1,087.3	945.2	1,440.4	1.54	-1.11	
9,780.0	0.70	88.20	9,646.6	-1,087.0	945.7	1,440.5	1.91	-1.00	
9,872.0	1.90	359.70	9,738.5	-1,085.5	946.2	1,439.7	2.18	1.30	
10,056.0	1.90	282.30	9,922.5	-1,081.8	943.2	1,434.9	1.29	0.00	
10,147.0	1.80	284.50	10,013.4	-1,081.1	940.4	1,432.6	0.13	-0.11	
10,239.0	1.70	276.40	10,105.4	-1,080.6	937.6	1,430.4	0.29	-0.11	

# Cathedral Energy Services

## Survey Report

<b>Company:</b> EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b> Well 8508B-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> 8508B-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
10,330.0	1.60	269.20	10,196.3	-1,080.4	935.0	1,428.6	0.25	-0.11	
10,514.0	2.00	241.40	10,380.2	-1,082.0	929.6	1,426.4	0.52	0.22	
10,605.0	0.60	280.60	10,471.2	-1,082.7	927.8	1,425.7	1.74	-1.54	
10,697.0	0.60	256.50	10,563.2	-1,082.7	926.8	1,425.1	0.27	0.00	
10,789.0	1.00	52.10	10,655.2	-1,082.3	927.0	1,424.9	1.70	0.43	
10,881.0	0.60	173.10	10,747.2	-1,082.3	927.7	1,425.4	1.53	-0.43	
10,972.0	0.40	100.60	10,838.2	-1,082.8	928.0	1,426.0	0.67	-0.22	
11,064.0	0.60	351.10	10,930.2	-1,082.4	928.3	1,425.9	0.90	0.22	
11,155.0	1.00	353.90	11,021.2	-1,081.2	928.1	1,424.8	0.44	0.44	
11,247.0	0.10	216.70	11,113.2	-1,080.4	928.0	1,424.1	1.17	-0.98	
11,339.0	0.70	219.70	11,205.2	-1,080.9	927.6	1,424.3	0.65	0.65	
11,430.0	0.80	205.80	11,296.2	-1,081.9	926.9	1,424.6	0.23	0.11	
11,522.0	1.30	229.00	11,388.2	-1,083.2	925.9	1,424.9	0.70	0.54	
11,613.0	0.30	256.30	11,479.2	-1,083.9	924.9	1,424.8	1.15	-1.10	
11,705.0	0.80	280.60	11,571.1	-1,083.9	924.0	1,424.2	0.59	0.54	
11,797.0	1.40	287.20	11,663.1	-1,083.4	922.3	1,422.8	0.67	0.65	
11,888.0	1.70	280.60	11,754.1	-1,082.8	919.9	1,420.8	0.38	0.33	
11,980.0	2.10	274.60	11,846.0	-1,082.4	916.9	1,418.6	0.49	0.43	
12,072.0	3.10	257.90	11,938.0	-1,082.8	912.8	1,416.2	1.35	1.09	
12,164.0	3.30	258.20	12,029.8	-1,083.9	907.8	1,413.8	0.22	0.22	
12,255.0	3.10	247.10	12,120.7	-1,085.4	902.9	1,411.8	0.71	-0.22	
12,340.0	3.10	244.40	12,205.5	-1,087.3	898.7	1,410.6	0.17	0.00	

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
8508B-36 B36 496 TGT - hit/miss target - Shape	0.00	0.00	8,414.0	-1,095.6	917.6	1,676,268.60	2,265,264.27	39° 39' 40.21 N	108° 6' 36.34 W
- actual wellpath misses target center by 18.9ft at 8547.0ft MD (8413.7 TVD, -1088.1 N, 934.9 E)									
- Point									
8508B-36 B36 496 BHL - actual wellpath misses target center by 16.5ft at 12207.8ft MD (12073.5 TVD, -1084.5 N, 905.4 E)	0.00	0.00	12,074.0	-1,095.6	917.6	1,676,268.60	2,265,264.27	39° 39' 40.21 N	108° 6' 36.34 W
- 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)	
2,970.0	2,933.0	-323.4	272.0	Last Cathedral svy @ 2970'
12,255.0	12,120.7	-1,085.4	902.9	Last Cathedral Survey @ 12,255' MD
12,340.0	12,205.5	-1,087.3	898.7	Projection to bit @ 12,340' MD

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