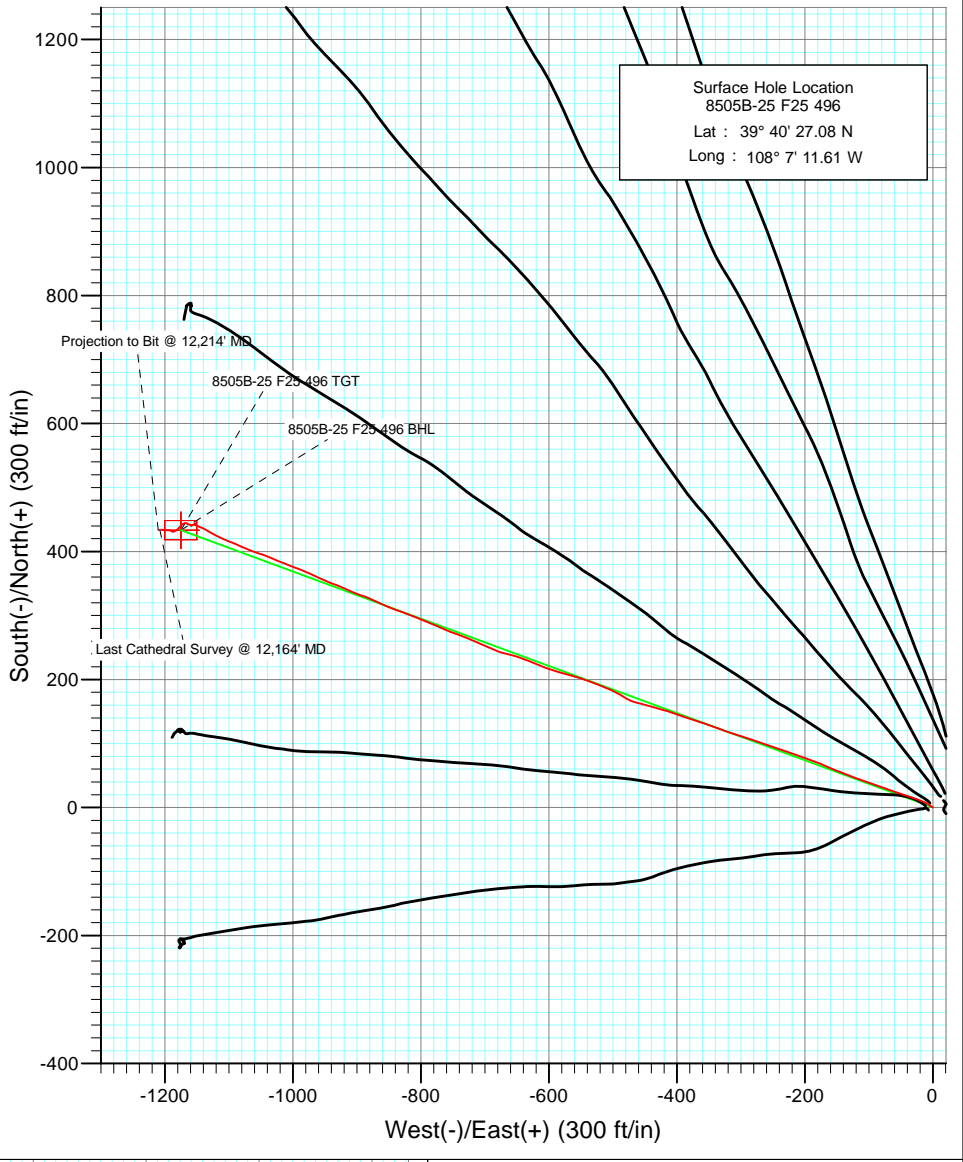
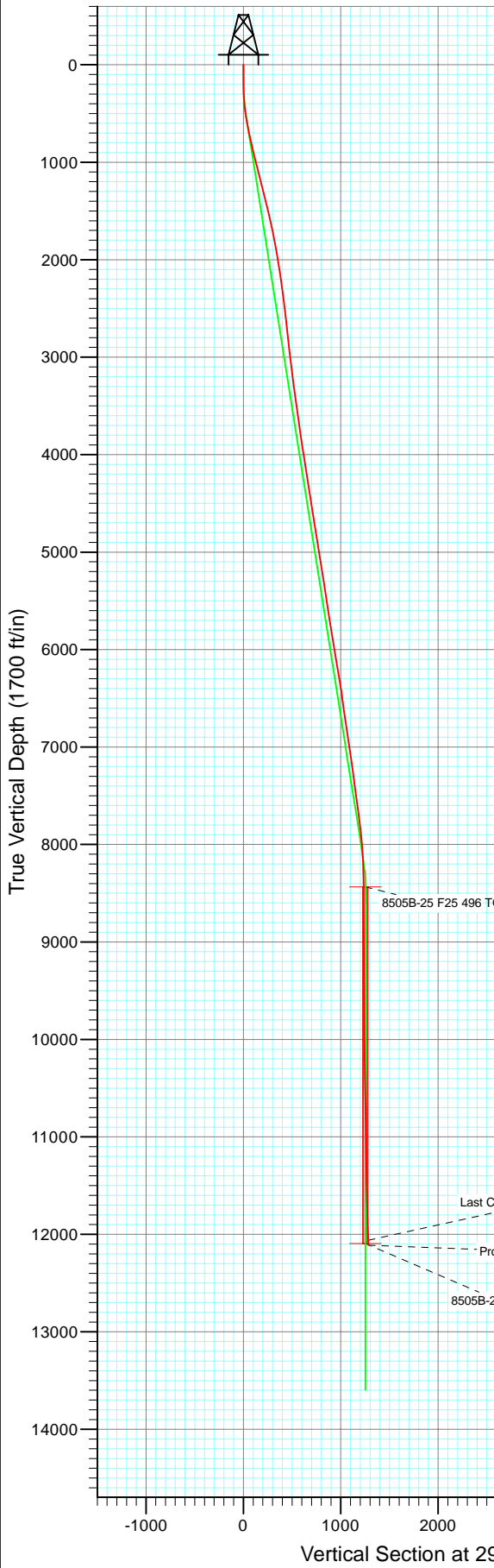
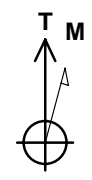




Project: Story Gulch  
 Site: F25 496  
 Well: 8505B-25 F25 496  
 Wellbore: DD  
 Design: Final Survey



Bottom Hole Location  
 8505B-25 F25 496  
 Lat : 39° 40' 31.36 N  
 Long : 108° 7' 26.64 W



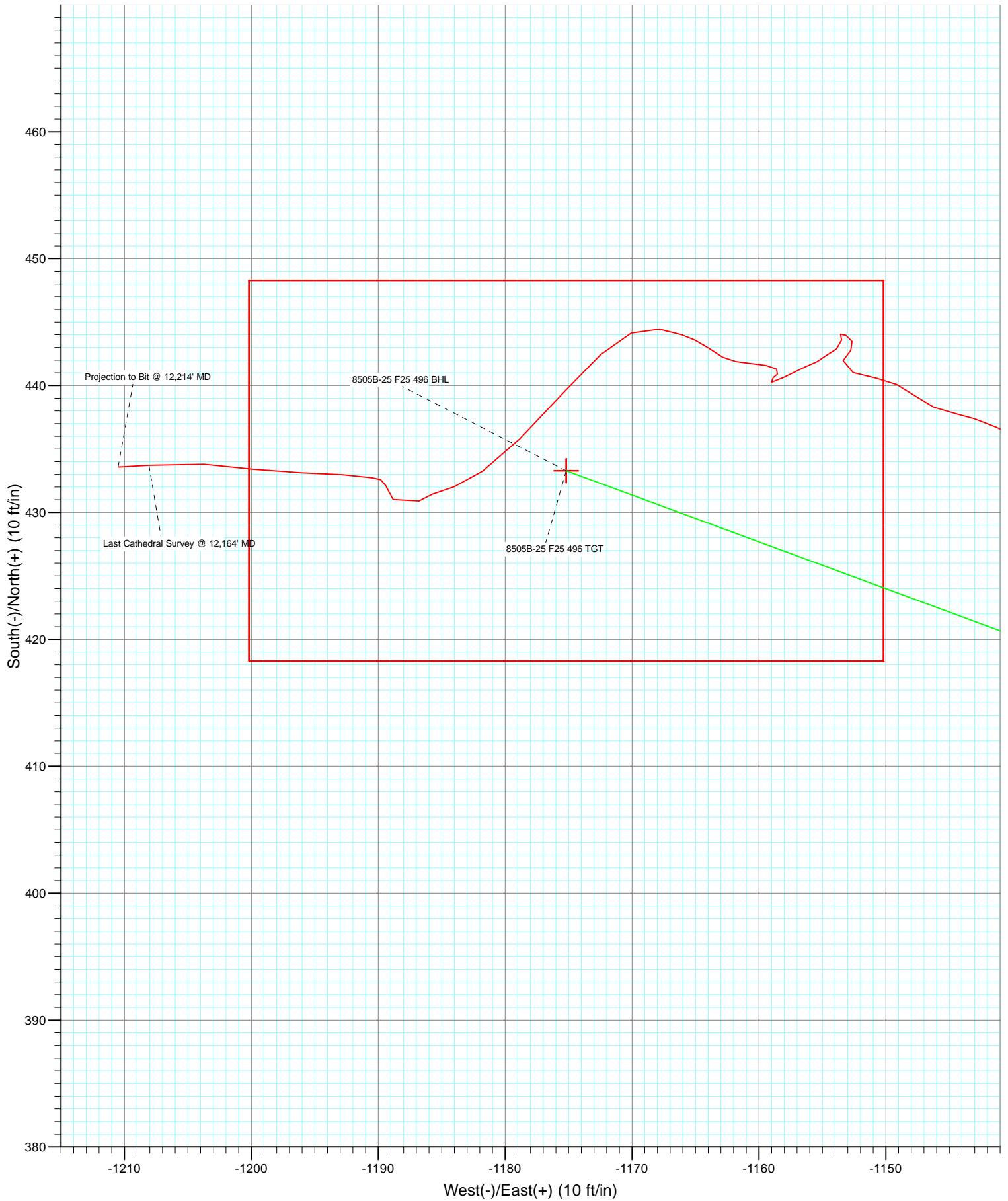
Azimuths to True North  
 Magnetic North: 10.57°  
 Magnetic Field  
 Strength: 52421.6snT  
 Dip Angle: 65.89°  
 Date: 5/15/2010  
 Model: IGRF2010

DESIGN DETAILS:  
 Job #105137, 105215: KR  
 KBE @ 8320.0ft (Patterson 306)

Target	Azimuth	Origin	N/S	E/W	From TVD
8505B-25 F25 496 BHL	1290.24	Slot	0.0	0.0	0.0



Project: Story Gulch  
Site: F25 496  
Well: 8505B-25 F25 496  
Wellbore: DD  
Design: Final Survey



# Cathedral Energy Services

## Survey Report

<b>Company:</b> EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b> Well 8505B-25 F25 496
<b>Project:</b> Story Gulch	<b>TVD Reference:</b> KBE @ 8320.0ft (Patterson 306)
<b>Site:</b> F25 496	<b>MD Reference:</b> KBE @ 8320.0ft (Patterson 306)
<b>Well:</b> 8505B-25 F25 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> F25 496					
<b>Site Position:</b>	<b>Northing:</b> 1,681,091.06 ft	<b>Latitude:</b> 39° 40' 27.10 N			
<b>From:</b> Lat/Long	<b>Easting:</b> 2,262,632.54 ft	<b>Longitude:</b> 108° 7' 11.76 W			
<b>Position Uncertainty:</b> 0.0 ft	<b>Slot Radius:</b> 13.200 in	<b>Grid Convergence:</b> -1.65 °			

<b>Well</b> 8505B-25 F25 496					
<b>Well Position</b>	<b>+N/-S</b> 0.0 ft	<b>Northing:</b> 1,681,088.28 ft	<b>Latitude:</b> 39° 40' 27.08 N		
	<b>+E/-W</b> 0.0 ft	<b>Easting:</b> 2,262,643.86 ft	<b>Longitude:</b> 108° 7' 11.61 W		
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 8,298.0 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>
	IGRF2010	5/15/2010	10.57	65.89	52,422

<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	290.24	

<b>Survey Program</b>		<b>Date</b> 11/30/2010
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>
144.0	2,879.0	Survey #1 (DD)
2,970.0	12,214.0	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	
144.0	0.80	301.60	144.0	0.5	-0.9	1.0	0.56	0.56	
235.0	1.20	291.80	235.0	1.2	-2.3	2.6	0.48	0.44	
297.0	2.10	321.10	297.0	2.3	-3.6	4.2	1.95	1.45	
328.0	2.60	300.70	327.9	3.1	-4.6	5.4	3.12	1.61	
358.0	3.50	309.60	357.9	4.1	-5.9	6.9	3.38	3.00	
389.0	4.20	304.50	388.8	5.3	-7.5	8.9	2.51	2.26	
420.0	5.20	295.60	419.7	6.6	-9.7	11.4	3.98	3.23	
481.0	7.80	293.30	480.3	9.4	-16.0	18.3	4.28	4.26	
574.0	10.30	288.60	572.2	14.5	-29.7	32.9	2.80	2.69	
664.0	11.50	289.10	660.5	20.1	-45.8	49.9	1.34	1.33	
757.0	12.70	289.70	751.5	26.5	-64.2	69.4	1.30	1.29	

# Cathedral Energy Services

## Survey Report

<b>Company:</b> EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b> Well 8505B-25 F25 496
<b>Project:</b> Story Gulch	<b>TVD Reference:</b> KBE @ 8320.0ft (Patterson 306)
<b>Site:</b> F25 496	<b>KBE Reference:</b> KBE @ 8320.0ft (Patterson 306)
<b>Well:</b> 8505B-25 F25 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
884.0	12.90	287.40	875.3	35.5	-90.9	97.5	0.43	0.16	
979.0	13.60	289.50	967.8	42.4	-111.5	119.3	0.89	0.74	
1,074.0	14.70	292.20	1,059.9	50.7	-133.2	142.5	1.35	1.16	
1,169.0	14.50	293.20	1,151.8	59.9	-155.3	166.4	0.34	-0.21	
1,264.0	14.00	290.90	1,243.9	68.7	-176.9	189.8	0.79	-0.53	
1,358.0	14.50	290.50	1,335.0	76.9	-198.6	212.9	0.54	0.53	
1,453.0	13.30	288.50	1,427.2	84.5	-220.1	235.7	1.36	-1.26	
1,548.0	13.20	288.60	1,519.7	91.4	-240.7	257.5	0.11	-0.11	
1,644.0	13.10	289.50	1,613.2	98.5	-261.4	279.3	0.24	-0.10	
1,739.0	11.40	288.90	1,706.0	105.2	-280.4	299.5	1.79	-1.79	
1,834.0	11.20	287.80	1,799.2	111.0	-298.1	318.1	0.31	-0.21	
1,929.0	10.40	286.90	1,892.5	116.4	-315.1	335.9	0.86	-0.84	
2,024.0	9.00	290.60	1,986.1	121.5	-330.2	351.9	1.61	-1.47	
2,119.0	8.70	290.40	2,080.0	126.6	-343.9	366.5	0.32	-0.32	
2,214.0	8.40	288.60	2,173.9	131.3	-357.2	380.6	0.42	-0.32	
2,309.0	7.90	285.30	2,268.0	135.2	-370.1	394.0	0.72	-0.53	
2,404.0	7.60	290.70	2,362.1	139.2	-382.3	406.8	0.83	-0.32	
2,499.0	7.00	289.40	2,456.3	143.3	-393.6	418.9	0.66	-0.63	
2,594.0	6.70	289.80	2,550.7	147.1	-404.3	430.2	0.32	-0.32	
2,689.0	6.00	285.20	2,645.1	150.3	-414.3	440.7	0.91	-0.74	
2,784.0	6.30	286.60	2,739.5	153.1	-424.1	450.9	0.35	0.32	
2,879.0	6.60	285.40	2,833.9	156.0	-434.3	461.5	0.35	0.32	Last Cathedral Survey @ 2879' MD
2,970.0	6.70	285.70	2,924.3	158.9	-444.5	472.0	0.12	0.11	
3,083.0	6.40	285.10	3,036.6	162.3	-456.9	484.9	0.27	-0.27	
3,175.0	5.70	282.80	3,128.1	164.6	-466.3	494.5	0.81	-0.76	
3,266.0	7.50	300.90	3,218.5	168.7	-475.8	504.8	3.00	1.98	
3,358.0	8.50	297.80	3,309.6	174.9	-487.0	517.4	1.18	1.09	
3,450.0	7.90	299.60	3,400.6	181.2	-498.5	530.4	0.71	-0.65	
3,542.0	8.50	292.00	3,491.7	186.9	-510.3	543.5	1.35	0.65	
3,633.0	7.90	290.10	3,581.8	191.6	-522.4	556.4	0.72	-0.66	
3,725.0	9.20	292.10	3,672.7	196.5	-535.2	570.1	1.45	1.41	
3,817.0	7.90	287.00	3,763.7	201.1	-548.0	583.8	1.63	-1.41	
3,908.0	9.00	286.80	3,853.7	205.0	-560.8	597.1	1.21	1.21	
4,000.0	7.50	282.60	3,944.8	208.4	-573.6	610.3	1.76	-1.63	
4,092.0	8.30	288.00	4,035.9	211.8	-585.8	622.8	1.19	0.87	
4,183.0	9.50	290.70	4,125.8	216.4	-599.0	636.9	1.40	1.32	
4,275.0	8.70	288.40	4,216.7	221.3	-612.7	651.5	0.96	-0.87	
4,367.0	8.90	294.80	4,307.6	226.5	-625.8	665.5	1.09	0.22	
4,458.0	9.80	289.60	4,397.4	232.1	-639.5	680.3	1.36	0.99	
4,550.0	8.70	286.50	4,488.2	236.7	-653.5	695.0	1.31	-1.20	
4,642.0	9.10	283.60	4,579.1	240.3	-667.3	709.2	0.65	0.43	
4,733.0	9.20	290.00	4,668.9	244.5	-681.1	723.6	1.12	0.11	
4,825.0	9.60	295.70	4,759.7	250.4	-694.9	738.6	1.10	0.43	
4,917.0	8.50	293.20	4,850.5	256.4	-708.1	753.1	1.27	-1.20	
5,008.0	9.20	293.00	4,940.4	261.9	-721.0	767.0	0.77	0.77	
5,100.0	8.30	290.60	5,031.4	267.1	-734.0	781.0	1.06	-0.98	
5,192.0	9.00	288.80	5,122.3	271.7	-747.0	794.9	0.82	0.76	
5,284.0	9.60	294.50	5,213.1	277.2	-760.8	809.7	1.19	0.65	
5,375.0	9.30	292.50	5,302.9	283.2	-774.5	824.6	0.49	-0.33	
5,467.0	8.30	292.30	5,393.8	288.6	-787.5	838.7	1.09	-1.09	
5,559.0	8.30	293.40	5,484.8	293.7	-799.7	852.0	0.17	0.00	
5,650.0	9.60	291.90	5,574.7	299.2	-812.8	866.1	1.45	1.43	
5,742.0	9.00	288.00	5,665.5	304.2	-826.8	881.0	0.95	-0.65	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8505B-25 F25 496
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KBE @ 8320.0ft (Patterson 306)
<b>Site:</b>	F25 496	<b>MVD Reference:</b>	KBE @ 8320.0ft (Patterson 306)
<b>Well:</b>	8505B-25 F25 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
5,834.0	9.10	291.60	5,756.4	309.1	-840.4	895.4	0.62	0.11	
5,925.0	8.80	293.10	5,846.3	314.5	-853.5	909.6	0.42	-0.33	
6,017.0	9.40	294.50	5,937.1	320.4	-866.8	924.1	0.70	0.65	
6,109.0	10.10	294.00	6,027.8	326.8	-881.0	939.6	0.77	0.76	
6,201.0	8.90	288.00	6,118.5	332.3	-895.1	954.8	1.69	-1.30	
6,292.0	9.50	292.00	6,208.3	337.3	-908.8	969.3	0.96	0.66	
6,384.0	9.80	296.70	6,299.0	343.6	-922.8	984.7	0.92	0.33	
6,476.0	9.50	287.20	6,389.7	349.4	-937.0	1,000.1	1.76	-0.33	
6,567.0	7.30	295.80	6,479.8	354.1	-949.4	1,013.3	2.78	-2.42	
6,659.0	6.90	296.40	6,571.1	359.1	-959.6	1,024.6	0.44	-0.43	
6,751.0	8.40	293.00	6,662.2	364.2	-970.8	1,036.8	1.70	1.63	
6,842.0	9.00	289.90	6,752.2	369.2	-983.6	1,050.6	0.84	0.66	
6,934.0	8.90	294.40	6,843.1	374.6	-996.8	1,064.9	0.77	-0.11	
7,026.0	8.60	290.50	6,934.0	380.0	-1,009.8	1,078.9	0.72	-0.33	
7,118.0	8.40	292.00	7,025.0	384.9	-1,022.4	1,092.5	0.32	-0.22	
7,209.0	8.20	293.50	7,115.0	390.0	-1,034.5	1,105.6	0.32	-0.22	
7,301.0	7.70	290.10	7,206.2	394.7	-1,046.4	1,118.3	0.75	-0.54	
7,393.0	6.90	286.20	7,297.4	398.4	-1,057.4	1,130.0	1.02	-0.87	
7,485.0	7.80	293.10	7,388.7	402.4	-1,068.5	1,141.7	1.37	0.98	
7,576.0	8.10	295.30	7,478.8	407.5	-1,080.0	1,154.3	0.47	0.33	
7,668.0	7.90	292.20	7,569.9	412.7	-1,091.7	1,167.0	0.52	-0.22	
7,760.0	7.70	291.10	7,661.0	417.3	-1,103.3	1,179.5	0.27	-0.22	
7,852.0	6.70	297.50	7,752.3	422.0	-1,113.8	1,191.0	1.39	-1.09	
7,943.0	6.90	294.60	7,842.7	426.7	-1,123.5	1,201.7	0.44	0.22	
8,035.0	5.80	303.80	7,934.1	431.6	-1,132.4	1,211.8	1.63	-1.20	
8,127.0	4.40	297.20	8,025.7	435.8	-1,139.4	1,219.8	1.65	-1.52	
8,218.0	2.50	280.60	8,116.6	437.8	-1,144.4	1,225.2	2.34	-2.09	
8,310.0	2.10	309.20	8,208.5	439.2	-1,147.7	1,228.8	1.30	-0.43	
8,402.0	2.20	280.60	8,300.4	440.6	-1,150.8	1,232.1	1.16	0.11	
8,585.0	0.70	49.20	8,483.4	442.0	-1,153.4	1,235.0	1.47	-0.82	
8,677.0	0.60	21.60	8,575.4	442.8	-1,152.8	1,234.8	0.35	-0.11	
8,772.0	0.30	341.10	8,670.4	443.5	-1,152.7	1,234.9	0.44	-0.32	
8,864.0	0.60	301.50	8,762.4	444.0	-1,153.1	1,235.5	0.45	0.33	
8,956.0	0.20	186.50	8,854.4	444.0	-1,153.6	1,236.0	0.77	-0.43	
9,048.0	0.40	161.60	8,946.4	443.6	-1,153.5	1,235.7	0.25	0.22	
9,139.0	0.80	231.60	9,037.4	442.9	-1,153.9	1,235.9	0.84	0.44	
9,231.0	0.50	246.50	9,129.4	442.3	-1,154.8	1,236.5	0.37	-0.33	
9,323.0	0.50	224.60	9,221.4	441.9	-1,155.4	1,236.9	0.21	0.00	
9,415.0	0.90	259.00	9,313.4	441.5	-1,156.4	1,237.7	0.61	0.43	
9,506.0	1.50	234.60	9,404.3	440.6	-1,158.1	1,239.0	0.85	0.66	
9,598.0	0.40	4.50	9,496.3	440.3	-1,159.0	1,239.8	1.94	-1.20	
9,690.0	0.20	63.80	9,588.3	440.6	-1,158.9	1,239.7	0.37	-0.22	
9,782.0	0.30	42.40	9,680.3	440.9	-1,158.5	1,239.5	0.15	0.11	
9,873.0	0.40	318.10	9,771.3	441.3	-1,158.6	1,239.7	0.52	0.11	
9,965.0	0.80	273.70	9,863.3	441.6	-1,159.5	1,240.6	0.64	0.43	
10,057.0	0.70	280.60	9,955.3	441.7	-1,160.6	1,241.8	0.15	-0.11	
10,148.0	0.80	275.10	10,046.3	441.9	-1,161.8	1,243.0	0.14	0.11	
10,240.0	0.60	307.00	10,138.3	442.2	-1,162.9	1,244.0	0.47	-0.22	
10,332.0	1.00	300.30	10,230.3	442.9	-1,163.9	1,245.3	0.45	0.43	
10,423.0	0.60	300.60	10,321.3	443.6	-1,165.0	1,246.5	0.44	-0.44	
10,515.0	0.80	286.10	10,413.3	444.0	-1,166.1	1,247.7	0.29	0.22	
10,607.0	1.50	282.90	10,505.3	444.4	-1,167.8	1,249.5	0.76	0.76	
10,698.0	1.50	240.90	10,596.2	444.1	-1,170.1	1,251.5	1.18	0.00	

# Cathedral Energy Services

## Survey Report

<b>Company:</b> EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b> Well 8505B-25 F25 496
<b>Project:</b> Story Gulch	<b>TVD Reference:</b> KBE @ 8320.0ft (Patterson 306)
<b>Site:</b> F25 496	<b>MD Reference:</b> KBE @ 8320.0ft (Patterson 306)
<b>Well:</b> 8505B-25 F25 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
10,790.0	2.20	231.10	10,688.2	442.4	-1,172.5	1,253.1	0.83	0.76	
10,882.0	2.90	219.00	10,780.1	439.5	-1,175.3	1,254.8	0.96	0.76	
10,974.0	3.50	227.30	10,872.0	435.8	-1,178.8	1,256.8	0.82	0.65	
11,065.0	1.40	232.80	10,962.9	433.3	-1,181.8	1,258.7	2.32	-2.31	
11,157.0	1.80	247.80	11,054.8	432.0	-1,184.0	1,260.4	0.63	0.43	
11,249.0	0.50	263.00	11,146.8	431.4	-1,185.7	1,261.8	1.44	-1.41	
11,341.0	1.00	233.90	11,238.8	430.9	-1,186.8	1,262.6	0.67	0.54	
11,524.0	0.80	325.00	11,421.8	431.0	-1,188.8	1,264.5	0.71	-0.11	
11,616.0	0.80	338.50	11,513.8	432.1	-1,189.4	1,265.5	0.20	0.00	
11,706.0	1.10	271.00	11,603.8	432.7	-1,190.5	1,266.7	1.21	0.33	
11,798.0	1.80	278.90	11,695.7	433.0	-1,192.8	1,269.0	0.79	0.76	
11,889.0	2.30	267.70	11,786.7	433.1	-1,196.1	1,272.0	0.70	0.55	
11,981.0	2.40	280.60	11,878.6	433.4	-1,199.8	1,275.6	0.58	0.11	
12,072.0	2.60	271.30	11,969.5	433.8	-1,203.7	1,279.5	0.50	0.22	
12,164.0	2.80	266.60	12,061.4	433.7	-1,208.1	1,283.5	0.32	0.22	Last Cathedral Survey @ 12,164' MD
12,214.0	2.80	266.60	12,111.4	433.6	-1,210.5	1,285.7	0.00	0.00	Projection to Bit @ 12,214' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
8505B-25 F25 496 BHL - hit/miss target - Shape	0.00	0.00	12,095.0	433.3	-1,175.2	1,681,555.28	2,261,481.66	39° 40' 31.36 N	108° 7' 26.64 W
- actual wellpath misses target center by 34.5ft at 12195.9ft MD (12093.3 TVD, 433.6 N, -1209.6 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
8505B-25 F25 496 TGT - actual wellpath misses target center by 23.2ft at 8536.8ft MD (8435.2 TVD, 441.6 N, -1153.5 E)	0.00	0.00	8,435.0	433.3	-1,175.2	1,681,555.28	2,261,481.66	39° 40' 31.36 N	108° 7' 26.64 W
- Point									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,879.0	2,833.9	156.0	-434.3	Last Cathedral Survey @ 2879' MD
12,164.0	12,061.4	433.7	-1,208.1	Last Cathedral Survey @ 12,164' MD
12,214.0	12,111.4	433.6	-1,210.5	Projection to Bit @ 12,214' MD

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