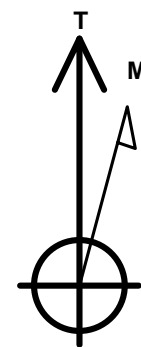
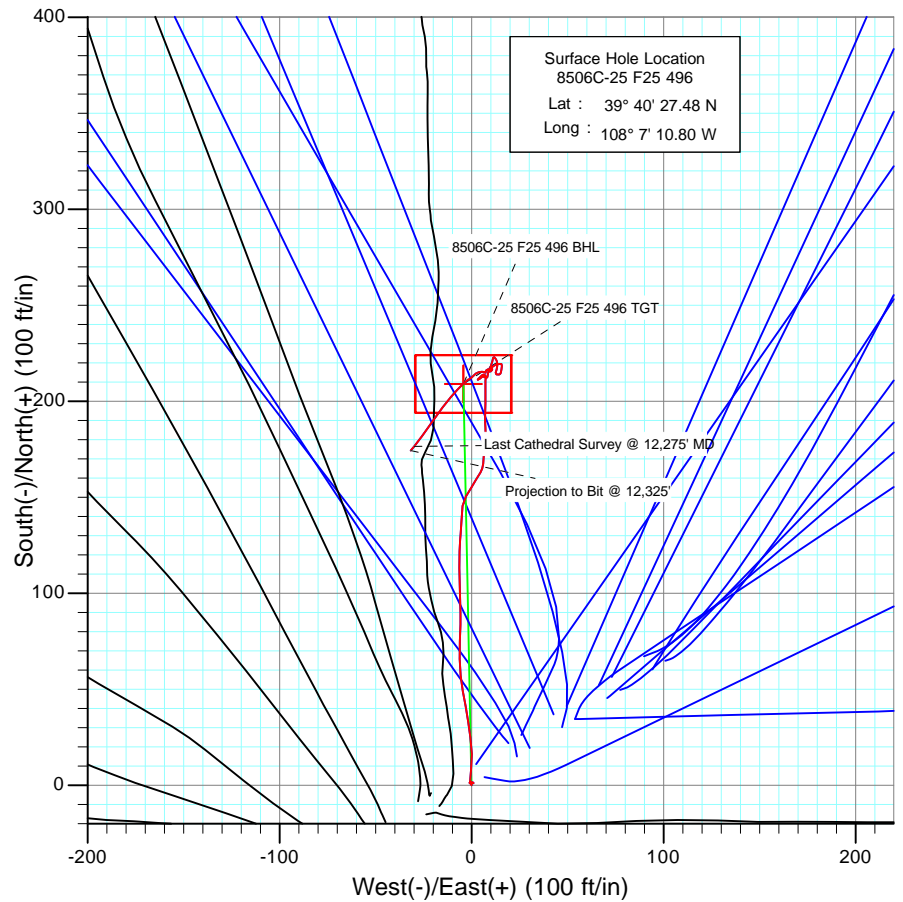
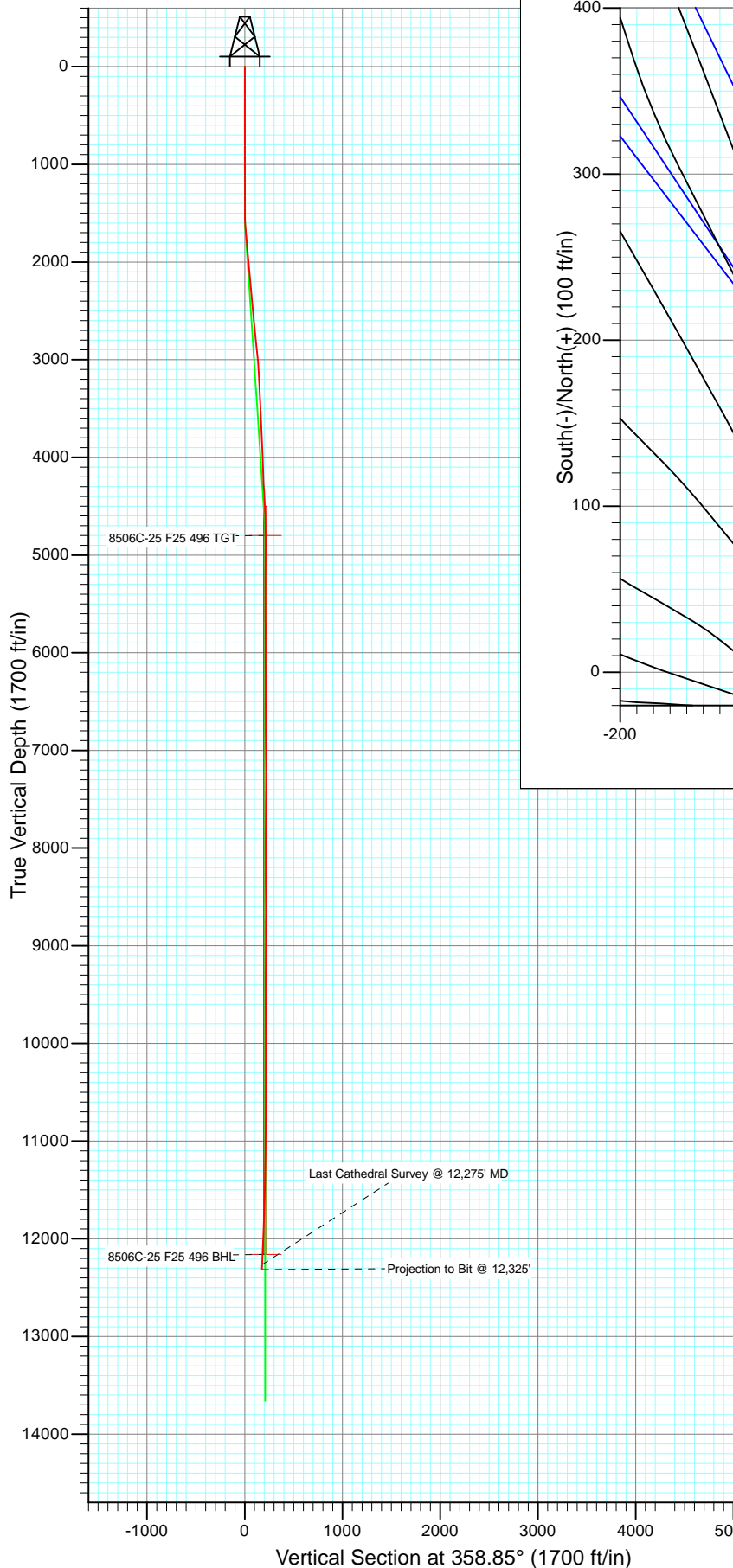




Project: Story Gulch  
 Site: F25 496  
 Well: 8506C-25 F25 496  
 Wellbore: DD  
 Design: FINAL



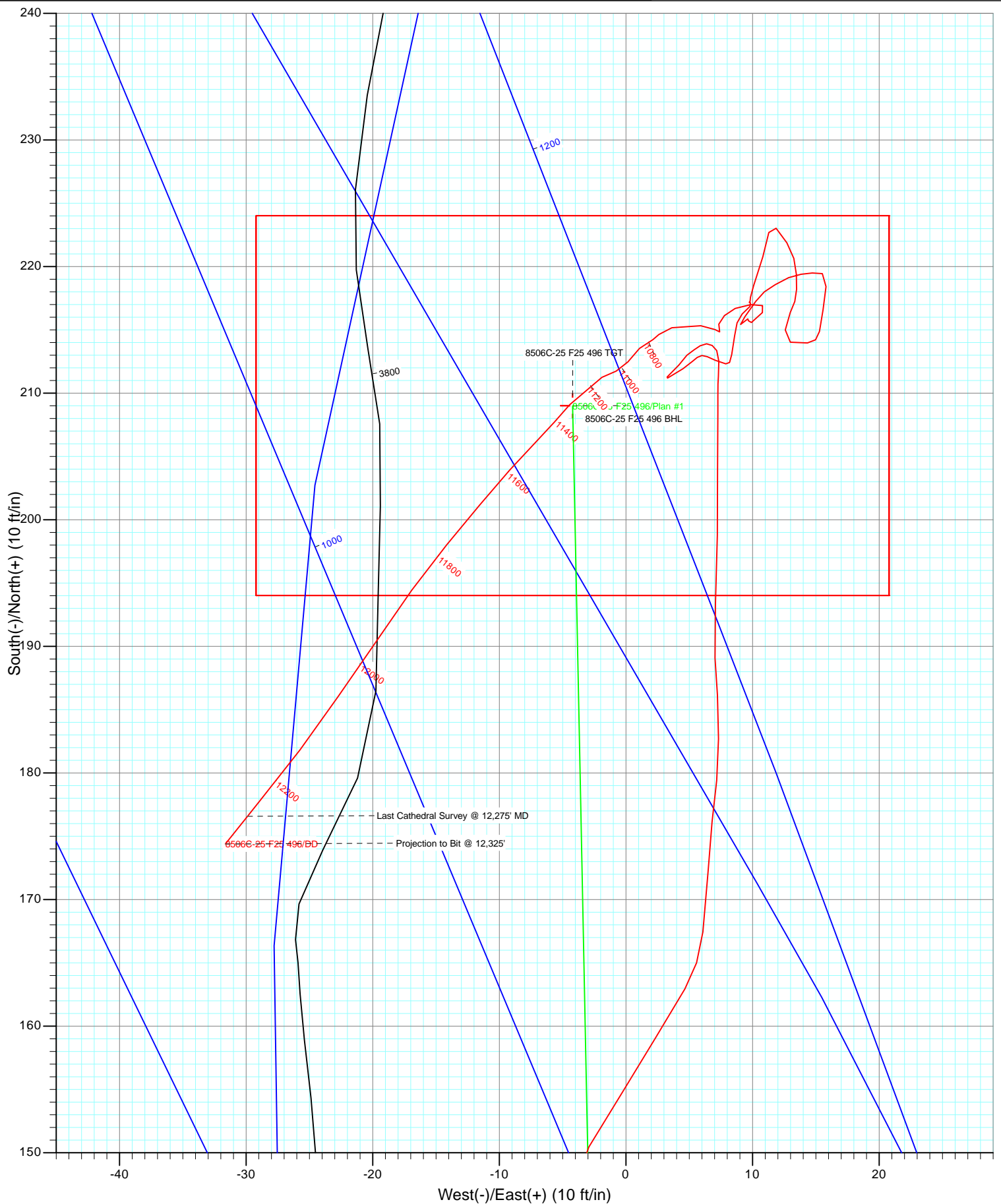
Azimuths to True North  
 Magnetic North: 10.50°

Magnetic Field  
 Strength: 52369.4snT  
 Dip Angle: 65.88°  
 Date: 11/20/2010  
 Model: IGRF2010

DD 8506C-25 F25 496						
KBE @ 8320.0ft (Patterson 306) North American Datum 1983 Well 8506C-25 F25 496, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W
Target	8506C-25 F25 496 BHL	358.85	Slot		0.0	0.0
	TVD	+N/-S	+E/-W		Latitude	Longitude
	4800.0					
	12160.0	209.0	-4.2		39° 40' 29.55 N	108° 7' 10.85 W



Project: Story Gulch  
Site: F25 496  
Well: 8506C-25 F25 496  
Wellbore: DD  
Design: FINAL



# Cathedral Energy

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8506C-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>	8506C-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		

Site		F25 496			
Site Position:		Northing:	1,681,091.06 ft	Latitude:	39° 40' 27.10 N
From:	Lat/Long	Easting:	2,262,632.54 ft	Longitude:	108° 7' 11.76 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.65 °

Well	8506C-25 F25 496					
Well Position	+N/-S	0.0 ft	Northing:	1,681,127.53 ft	Latitude:	39° 40' 27.48 N
	+E/-W	0.0 ft	Easting:	2,262,708.65 ft	Longitude:	108° 7' 10.80 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	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	11/20/2010	10.50	65.88	52,369

<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	358.85	

<b>Survey Program</b>	<b>Date</b>	12/6/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
245.0	12,325.0	Survey #1 (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		
245.0	0.50	327.90	245.0	0.9	-0.6	0.9	0.20	0.20		
275.0	0.20	309.70	275.0	1.0	-0.7	1.1	1.05	-1.00		
336.0	0.10	256.90	336.0	1.1	-0.8	1.1	0.26	-0.16		
427.0	0.20	315.30	427.0	1.2	-1.0	1.2	0.19	0.11		
519.0	0.30	58.00	519.0	1.4	-0.9	1.5	0.43	0.11		
610.0	0.10	241.00	610.0	1.5	-0.8	1.5	0.44	-0.22		
702.0	0.40	90.50	702.0	1.5	-0.5	1.5	0.53	0.33		
797.0	0.20	127.40	797.0	1.4	-0.1	1.4	0.28	-0.21		
892.0	0.60	112.20	892.0	1.1	0.5	1.1	0.43	0.42		
987.0	0.30	15.10	987.0	1.1	1.1	1.1	0.74	-0.32		
1,083.0	0.20	270.00	1,083.0	1.4	1.0	1.4	0.42	-0.10		
1,178.0	0.30	318.00	1,178.0	1.6	0.6	1.6	0.23	0.11		

# Cathedral Energy

## Survey Report

**Company:** EnCana Oil & Gas (USA) Inc  
**Project:** Story Gulch  
**Site:** F25 496  
**Well:** 8506C-25 F25 496  
**Wellbore:** DD  
**Design:** DD

**Local Co-ordinate Reference:** Well 8506C-25 F25 496  
**TVD Reference:** KBE @ 8320.0ft (Patterson 306)  
**MD Reference:** KBE @ 8320.0ft (Patterson 306)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** 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
1,273.0	0.50	246.80	1,273.0	1.6	0.1	1.6	0.52	0.21	
1,368.0	0.20	296.20	1,368.0	1.5	-0.5	1.5	0.42	-0.32	
1,463.0	0.10	203.80	1,463.0	1.5	-0.6	1.5	0.24	-0.11	
1,558.0	1.80	0.20	1,558.0	2.9	-0.7	2.9	1.99	1.79	
1,654.0	4.40	6.70	1,653.8	8.1	-0.2	8.1	2.73	2.71	
1,749.0	5.40	359.70	1,748.5	16.2	0.2	16.2	1.22	1.05	
1,844.0	5.10	349.90	1,843.1	24.8	-0.6	24.8	0.99	-0.32	
1,939.0	5.10	353.90	1,937.7	33.2	-1.8	33.2	0.37	0.00	
2,034.0	4.90	347.90	2,032.3	41.3	-3.1	41.4	0.59	-0.21	
2,129.0	4.80	350.70	2,127.0	49.2	-4.6	49.3	0.27	-0.11	
2,224.0	4.90	354.00	2,221.7	57.2	-5.6	57.3	0.31	0.11	
2,319.0	5.50	358.70	2,316.3	65.8	-6.2	65.9	0.77	0.63	
2,414.0	5.60	2.70	2,410.8	74.9	-6.1	75.0	0.42	0.11	
2,508.0	5.30	1.20	2,504.4	83.9	-5.7	84.0	0.35	-0.32	
2,603.0	6.00	359.20	2,598.9	93.2	-5.7	93.3	0.77	0.74	
2,698.0	5.40	355.80	2,693.5	102.6	-6.1	102.7	0.72	-0.63	
2,793.0	6.10	1.20	2,788.0	112.1	-6.3	112.2	0.93	0.74	
2,888.0	5.80	1.30	2,882.5	122.0	-6.1	122.1	0.32	-0.32	
2,980.0	5.40	4.40	2,974.0	131.0	-5.7	131.0	0.54	-0.43	
3,088.0	4.00	3.50	3,081.7	139.8	-5.1	139.9	1.30	-1.30	
3,179.0	3.30	5.80	3,172.5	145.6	-4.6	145.6	0.79	-0.77	
3,270.0	3.40	31.80	3,263.3	150.5	-2.9	150.5	1.66	0.11	
3,362.0	3.20	31.40	3,355.2	155.0	-0.2	154.9	0.22	-0.22	
3,453.0	2.90	30.80	3,446.1	159.1	2.4	159.0	0.33	-0.33	
3,545.0	2.70	31.20	3,537.9	163.0	4.7	162.8	0.22	-0.22	
3,637.0	3.30	6.50	3,629.8	167.4	6.1	167.3	1.53	0.65	
3,728.0	2.70	3.00	3,720.7	172.2	6.5	172.0	0.69	-0.66	
3,819.0	2.30	6.10	3,811.6	176.1	6.8	176.0	0.46	-0.44	
3,911.0	1.80	6.80	3,903.6	179.4	7.2	179.2	0.54	-0.54	
4,003.0	2.30	359.30	3,995.5	182.7	7.3	182.5	0.62	0.54	
4,095.0	2.00	357.80	4,087.4	186.1	7.2	186.0	0.33	-0.33	
4,186.0	1.70	354.40	4,178.4	189.1	7.0	188.9	0.35	-0.33	
4,278.0	3.60	3.20	4,270.3	193.3	7.1	193.1	2.11	2.07	
4,369.0	3.30	359.90	4,361.1	198.8	7.2	198.6	0.40	-0.33	
4,461.0	3.00	0.70	4,453.0	203.8	7.2	203.7	0.33	-0.33	
4,552.0	2.80	359.60	4,543.9	208.4	7.3	208.3	0.23	-0.22	
4,644.0	0.80	5.10	4,635.8	211.3	7.3	211.1	2.18	-2.17	
4,735.0	0.70	358.50	4,726.8	212.5	7.3	212.3	0.15	-0.11	
4,827.0	0.40	330.30	4,818.8	213.4	7.2	213.2	0.43	-0.33	
4,918.0	0.30	302.40	4,909.8	213.8	6.8	213.6	0.21	-0.11	
5,010.0	0.30	271.90	5,001.8	213.9	6.4	213.7	0.17	0.00	
5,101.0	0.40	237.70	5,092.8	213.7	5.9	213.6	0.25	0.11	
5,193.0	0.30	233.90	5,184.8	213.4	5.4	213.3	0.11	-0.11	
5,285.0	0.60	232.80	5,276.8	213.0	4.8	212.9	0.33	0.33	
5,376.0	0.70	207.70	5,367.8	212.2	4.2	212.1	0.33	0.11	
5,468.0	1.00	236.30	5,459.8	211.3	3.3	211.2	0.56	0.33	
5,560.0	1.00	62.60	5,551.8	211.2	3.3	211.1	2.17	0.00	
5,651.0	0.80	54.00	5,642.8	211.9	4.5	211.8	0.26	-0.22	
5,743.0	0.40	49.10	5,734.7	212.5	5.3	212.4	0.44	-0.43	
5,834.0	0.20	52.80	5,825.7	212.8	5.6	212.7	0.22	-0.22	
5,926.0	0.30	77.00	5,917.7	213.0	6.0	212.8	0.16	0.11	
6,018.0	0.30	128.90	6,009.7	212.9	6.4	212.7	0.29	0.00	
6,109.0	0.60	106.50	6,100.7	212.6	7.1	212.4	0.38	0.33	

# Cathedral Energy

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8506C-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>	8506C-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
6,200.0	0.50	111.80	6,191.7	212.3	7.9	212.1	0.12	-0.11	
6,292.0	1.10	5.40	6,283.7	213.0	8.4	212.8	1.45	0.65	
6,384.0	0.80	14.50	6,375.7	214.5	8.6	214.3	0.36	-0.33	
6,475.0	0.50	3.80	6,466.7	215.6	8.8	215.3	0.35	-0.33	
6,567.0	0.60	51.40	6,558.7	216.3	9.2	216.0	0.49	0.11	
6,659.0	0.50	39.30	6,650.7	216.9	9.8	216.6	0.17	-0.11	
6,750.0	0.30	262.00	6,741.7	217.1	9.8	216.9	0.82	-0.22	
6,842.0	0.20	67.10	6,833.7	217.2	9.7	216.9	0.54	-0.11	
6,933.0	0.10	280.10	6,924.7	217.2	9.8	217.0	0.32	-0.11	
7,025.0	1.60	16.30	7,016.7	218.5	10.1	218.2	1.75	1.63	
7,116.0	1.40	19.30	7,107.7	220.8	10.8	220.5	0.24	-0.22	
7,208.0	1.10	7.10	7,199.6	222.7	11.3	222.4	0.43	-0.33	
7,300.0	0.90	140.20	7,291.6	223.0	11.9	222.7	2.00	-0.22	
7,391.0	0.90	147.00	7,382.6	221.9	12.7	221.6	0.12	0.00	
7,483.0	0.80	165.70	7,474.6	220.6	13.3	220.3	0.32	-0.11	
7,575.0	0.80	176.40	7,566.6	219.4	13.5	219.1	0.16	0.00	
7,666.0	0.70	181.90	7,657.6	218.2	13.5	217.9	0.14	-0.11	
7,758.0	0.50	197.40	7,749.6	217.2	13.3	216.9	0.28	-0.22	
7,849.0	0.70	205.90	7,840.6	216.4	13.0	216.1	0.24	0.22	
7,941.0	1.10	189.60	7,932.6	215.0	12.6	214.7	0.51	0.43	
8,032.0	0.70	100.50	8,023.6	214.0	13.0	213.7	1.42	-0.44	
8,124.0	1.00	87.20	8,115.6	214.0	14.3	213.6	0.39	0.33	
8,216.0	1.10	9.60	8,207.5	214.9	15.3	214.5	1.43	0.11	
8,307.0	1.10	8.70	8,298.5	216.6	15.6	216.2	0.02	0.00	
8,398.0	1.20	5.90	8,389.5	218.4	15.8	218.0	0.13	0.11	
8,490.0	0.50	280.50	8,481.5	219.4	15.5	219.1	1.37	-0.76	
8,581.0	0.50	266.70	8,572.5	219.5	14.7	219.2	0.13	0.00	
8,673.0	0.60	260.70	8,664.5	219.4	13.8	219.1	0.13	0.11	
8,764.0	0.70	250.10	8,755.5	219.1	12.9	218.8	0.17	0.11	
8,856.0	0.80	235.10	8,847.5	218.6	11.8	218.3	0.24	0.11	
8,947.0	0.50	240.30	8,938.5	218.0	10.9	217.7	0.34	-0.33	
9,039.0	0.80	210.70	9,030.5	217.3	10.3	217.0	0.48	0.33	
9,130.0	1.10	218.10	9,121.5	216.0	9.4	215.8	0.36	0.33	
9,222.0	0.30	61.90	9,213.5	215.4	9.1	215.2	1.50	-0.87	
9,314.0	0.60	49.40	9,305.4	215.9	9.6	215.6	0.34	0.33	
9,405.0	0.70	214.80	9,396.4	215.7	9.7	215.5	1.42	0.11	
9,497.0	0.80	59.30	9,488.4	215.6	9.9	215.3	1.59	0.11	
9,588.0	0.70	35.00	9,579.4	216.4	10.8	216.1	0.36	-0.11	
9,680.0	0.40	286.60	9,671.4	216.9	10.8	216.7	0.99	-0.33	
9,771.0	0.80	268.40	9,762.4	217.0	9.9	216.7	0.48	0.44	
9,863.0	0.80	244.20	9,854.4	216.7	8.6	216.5	0.36	0.00	
9,955.0	0.50	223.60	9,946.4	216.1	7.8	215.9	0.41	-0.33	
10,048.0	0.50	201.90	10,039.4	215.5	7.3	215.3	0.20	0.00	
10,139.0	0.40	139.70	10,130.4	214.8	7.4	214.7	0.52	-0.11	
10,231.0	0.90	306.30	10,222.4	215.0	7.0	214.8	1.40	0.54	
10,322.0	0.70	257.60	10,313.4	215.3	5.9	215.2	0.75	-0.22	
10,414.0	0.70	275.10	10,405.4	215.3	4.8	215.1	0.23	0.00	
10,505.0	0.80	256.80	10,496.4	215.2	3.6	215.0	0.28	0.11	
10,688.0	0.20	136.50	10,679.4	214.6	2.6	214.5	0.50	-0.33	
10,780.0	0.80	243.80	10,771.4	214.2	2.1	214.2	0.96	0.65	
10,872.0	0.80	229.50	10,863.4	213.5	1.1	213.5	0.22	0.00	
10,963.0	1.00	213.40	10,954.4	212.5	0.2	212.4	0.35	0.22	
11,055.0	0.60	264.00	11,046.3	211.7	-0.8	211.7	0.84	-0.43	

# Cathedral Energy

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8506C-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>	8506C-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
11,146.0	1.00	236.50	11,137.3	211.3	-1.9	211.2	0.60	0.44	
11,329.0	1.10	223.10	11,320.3	209.1	-4.4	209.1	0.14	0.05	
11,421.0	1.20	219.90	11,412.3	207.7	-5.7	207.8	0.13	0.11	
11,515.0	1.60	225.40	11,506.3	206.0	-7.2	206.1	0.45	0.43	
11,604.0	2.10	220.90	11,595.2	203.9	-9.2	204.1	0.58	0.56	
11,695.0	2.50	220.60	11,686.1	201.2	-11.6	201.3	0.44	0.44	
11,787.0	2.60	218.60	11,778.0	198.0	-14.2	198.2	0.15	0.11	
11,879.0	3.00	216.70	11,869.9	194.4	-16.9	194.7	0.45	0.43	
12,062.0	3.40	213.00	12,052.7	186.1	-22.7	186.5	0.25	0.22	
12,154.0	3.10	218.30	12,144.5	181.8	-25.7	182.3	0.46	-0.33	
12,246.0	3.20	218.20	12,236.4	177.8	-28.9	178.4	0.11	0.11	
12,275.0	3.20	218.80	12,265.3	176.6	-29.9	177.1	0.12	0.00	Last Cathedral Survey @ 12,275' MD
12,325.0	3.20	218.80	12,315.2	174.4	-31.6	175.0	0.00	0.00	Projection to Bit @ 12,325'

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									
8506C-25 F25 496 BHL	0.00	0.00	12,160.0	209.0	-4.2	1,681,336.58	2,262,710.47	39° 40' 29.55 N	108° 7' 10.85 W
- survey misses target center by 35.5ft at 12167.6ft MD (12158.0 TVD, 181.2 N, -26.2 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
8506C-25 F25 496 TGT	0.00	0.00	4,800.0	209.0	-4.2	1,681,336.57	2,262,710.48	39° 40' 29.55 N	108° 7' 10.85 W
- survey misses target center by 12.2ft at 4808.2ft MD (4800.0 TVD, 213.2 N, 7.2 E)									
- Point									

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
12,275.0	12,265.3	176.6	-29.9	Last Cathedral Survey @ 12,275' MD	
12,325.0	12,315.2	174.4	-31.6	Projection to Bit @ 12,325'	

Checked By: _____	Approved By: _____	Date: _____
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