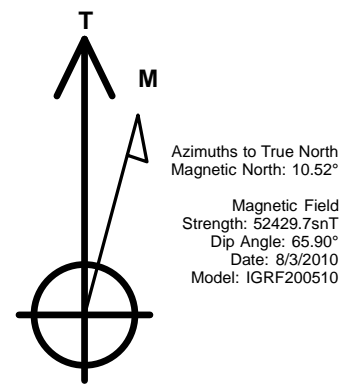
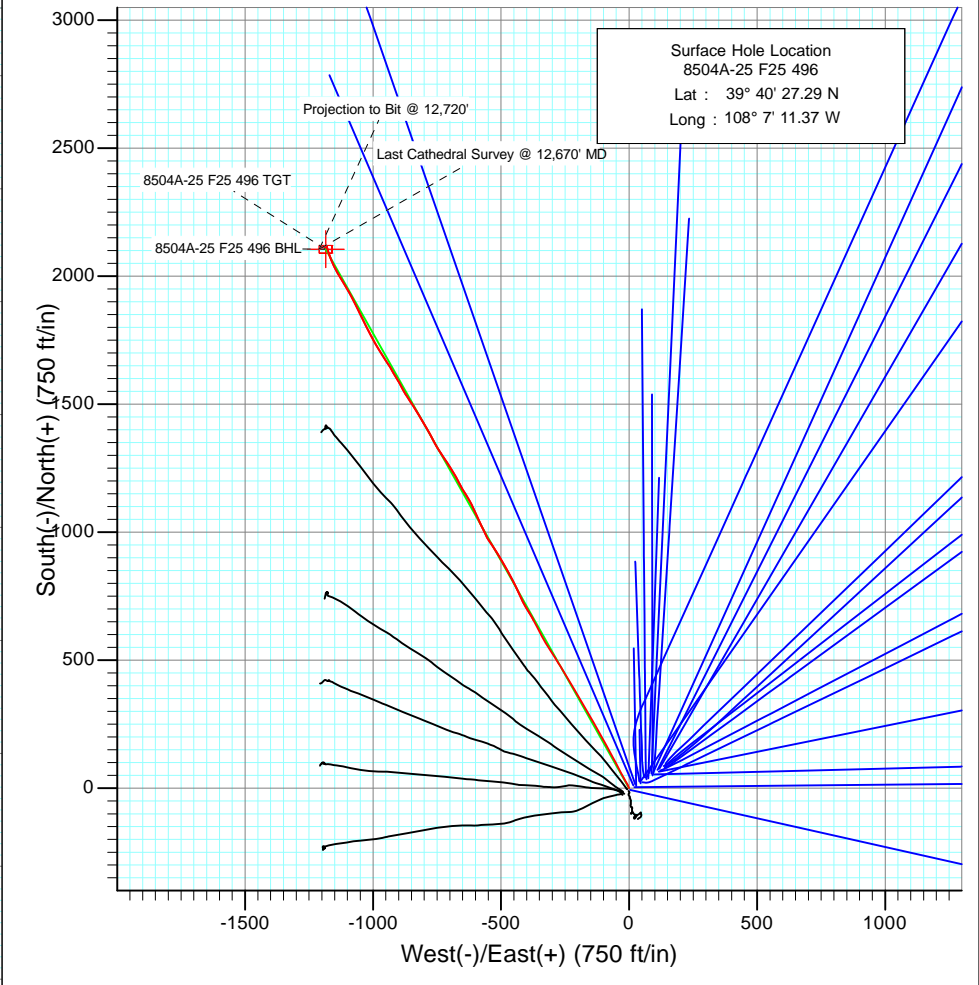
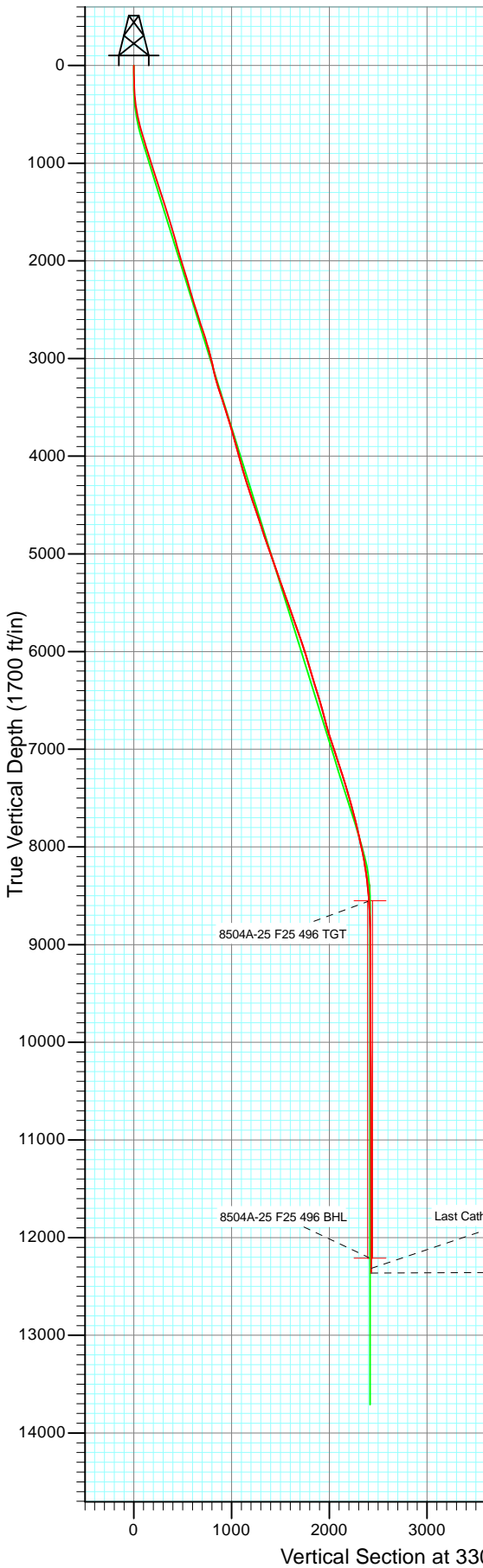




Project: Story Gulch
 Site: F25 496
 Well: 8504A-25 F25 496
 Wellbore: DD
 Design: FINAL



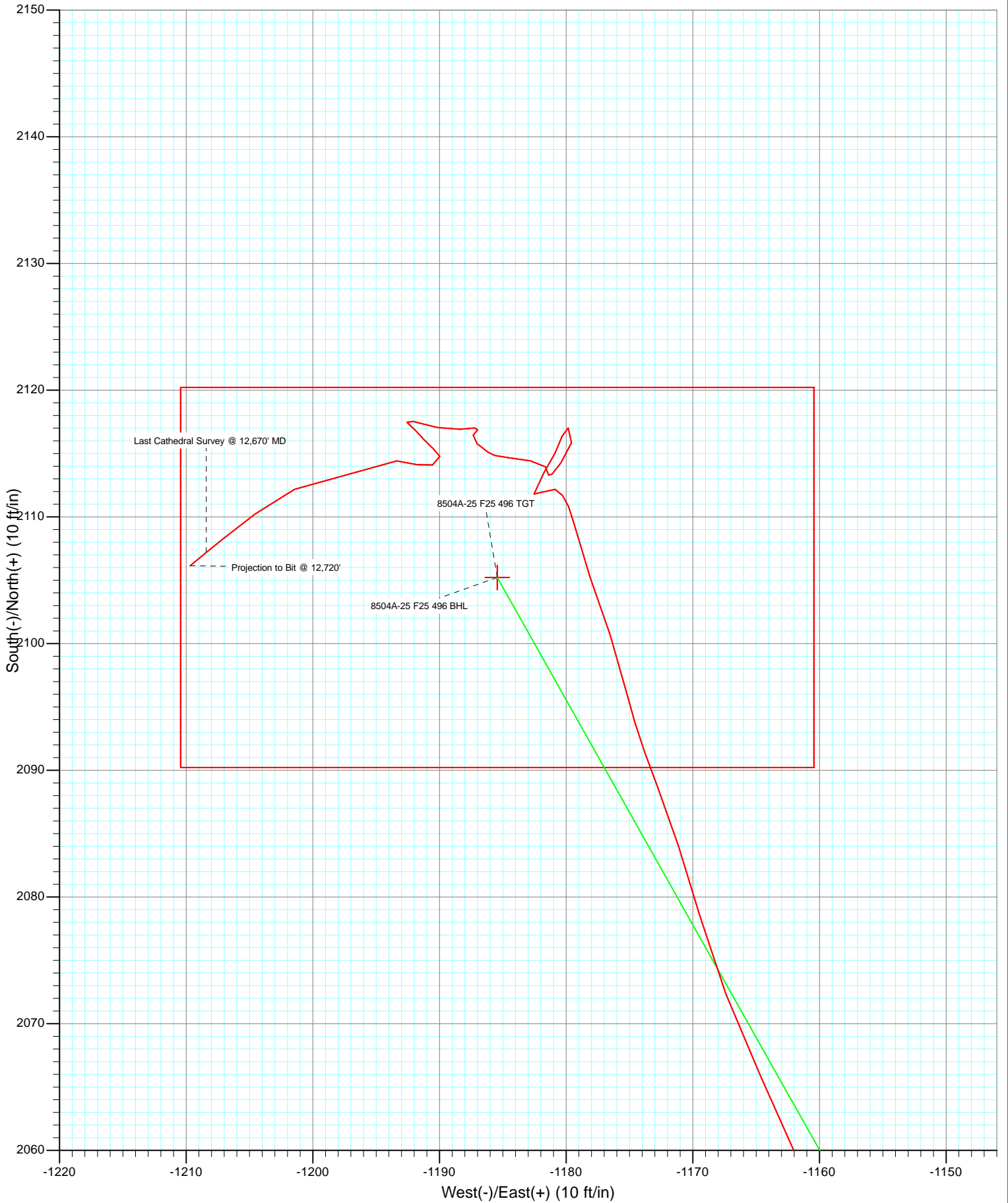
Bottom Hole Location
 8504A-25 F25 496
 Lat : 39° 40' 48.10 N
 Long. : 108° 7' 26.53 W

DESIGN DETAILS: DD
 Job #105171(SH):105297 (MH) KR
 KBE @ 8320.0ft (Patterson 306)

Target	Azimuth	Origin	N/S	E/W	From TVD
8504A-25 F25 496 BHL	330.62	Slot	0.0	0.0	0.0



Project: Story Gulch
Site: F25 496
Well: 8504A-25 F25 496
Wellbore: DD
Design: FINAL



Cathedral Energy

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well 8504A-25 F25 496
Project: Story Gulch	TVD Reference: KBE @ 8320.0ft (Patterson 306)
Site: F25 496	MD Reference: KBE @ 8320.0ft (Patterson 306)
Well: 8504A-25 F25 496	North Reference: True
Wellbore: DD	Survey Calculation Method: Minimum Curvature
Design: DD	Database: EDM 5000.1 US Multi Users DB

Project Story Gulch		
Map System: US State Plane 1983	System Datum: Mean Sea Level	
Geo Datum: North American Datum 1983		
Map Zone: 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 8504A-25 F25 496					
Well Position	+N/-S 0.0 ft	Northing: 1,681,109.61 ft	Latitude: 39° 40' 27.29 N		
	+E/-W 0.0 ft	Easting: 2,262,663.41 ft	Longitude: 108° 7' 11.37 W		
Position Uncertainty	0.0 ft	Wellhead Elevation: ft	Ground Level: 8,298.0 ft		

Wellbore DD					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/3/2010	10.52	65.90	52,430

Design DD					
Audit Notes:					
Version: 1.0	Phase: ACTUAL	Tie On Depth: 0.0			
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	330.62	

Survey Program		Date 9/23/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
217.0	2,980.0	Survey #1 (DD)	MWD	Geolink MWD	
3,087.0	12,720.0	Survey #2 (DD)	MWD	Geolink MWD	

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
2,980.0	16.10	331.60	2,870.3	656.7	-373.8	755.6	0.00	0.00	
3,087.0	13.70	329.10	2,973.7	680.6	-387.3	783.1	2.32	-2.24	
3,179.0	12.80	327.80	3,063.2	698.6	-398.4	804.2	1.03	-0.98	
3,270.0	12.70	330.70	3,152.0	715.9	-408.6	824.3	0.71	-0.11	
3,362.0	16.50	335.70	3,241.0	736.6	-418.9	847.4	4.35	4.13	
3,454.0	18.40	335.30	3,328.8	761.7	-430.4	874.9	2.07	2.07	
3,546.0	17.40	334.00	3,416.3	787.2	-442.5	903.1	1.17	-1.09	
3,637.0	17.50	332.50	3,503.1	811.6	-454.8	930.3	0.51	0.11	
3,729.0	17.90	331.80	3,590.8	836.3	-467.8	958.3	0.49	0.43	
3,821.0	17.00	330.10	3,678.5	860.5	-481.2	985.9	1.12	-0.98	
3,913.0	15.20	329.10	3,766.9	882.5	-494.1	1,011.4	1.98	-1.96	
4,004.0	16.00	330.10	3,854.6	903.6	-506.5	1,035.9	0.93	0.88	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8504A-25 F25 496
Project:	Story Gulch	TVD Reference:	KBE @ 8320.0ft (Patterson 306)
Site:	F25 496	MD Reference:	KBE @ 8320.0ft (Patterson 306)
Well:	8504A-25 F25 496	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	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
4,096.0	15.80	328.40	3,943.0	925.2	-519.4	1,061.1	0.55	-0.22	
4,188.0	14.20	323.00	4,031.9	944.9	-532.7	1,084.8	2.31	-1.74	
4,280.0	15.60	327.50	4,120.8	964.4	-546.2	1,108.3	1.97	1.52	
4,371.0	17.40	333.20	4,208.1	986.8	-558.9	1,134.1	2.66	1.98	
4,463.0	18.10	334.50	4,295.7	1,012.0	-571.2	1,162.1	0.87	0.76	
4,555.0	19.10	336.90	4,382.9	1,038.8	-583.3	1,191.3	1.37	1.09	
4,646.0	19.20	334.90	4,468.9	1,066.0	-595.5	1,221.1	0.73	0.11	
4,738.0	18.70	335.50	4,555.9	1,093.1	-608.0	1,250.8	0.58	-0.54	
4,830.0	18.10	330.70	4,643.2	1,119.0	-621.1	1,279.8	1.77	-0.65	
4,922.0	17.30	327.20	4,730.8	1,143.0	-635.5	1,307.8	1.45	-0.87	
5,014.0	18.20	329.90	4,818.4	1,166.9	-650.2	1,335.8	1.33	0.98	
5,105.0	19.70	331.30	4,904.5	1,192.7	-664.7	1,365.3	1.72	1.65	
5,197.0	19.80	331.70	4,991.1	1,220.0	-679.5	1,396.4	0.18	0.11	
5,289.0	19.20	329.10	5,077.8	1,246.7	-694.6	1,427.1	1.15	-0.65	
5,381.0	18.80	325.70	5,164.8	1,271.9	-710.8	1,457.0	1.28	-0.43	
5,472.0	18.90	324.80	5,250.9	1,296.1	-727.5	1,486.3	0.34	0.11	
5,564.0	20.00	328.20	5,337.7	1,321.6	-744.4	1,516.8	1.72	1.20	
5,656.0	19.70	332.40	5,424.2	1,348.7	-759.9	1,548.1	1.58	-0.33	
5,748.0	19.80	331.90	5,510.8	1,376.2	-774.4	1,579.1	0.21	0.11	
5,840.0	19.20	330.60	5,597.5	1,403.1	-789.2	1,609.8	0.80	-0.65	
5,931.0	19.40	328.40	5,683.4	1,429.0	-804.4	1,639.9	0.83	0.22	
6,023.0	19.30	329.20	5,770.2	1,455.1	-820.2	1,670.4	0.31	-0.11	
6,115.0	19.60	328.60	5,857.0	1,481.3	-836.1	1,701.0	0.39	0.33	
6,206.0	17.80	325.90	5,943.2	1,505.9	-851.8	1,730.1	2.19	-1.98	
6,298.0	17.40	327.80	6,030.9	1,529.2	-867.0	1,757.9	0.76	-0.43	
6,390.0	16.90	328.50	6,118.8	1,552.2	-881.3	1,785.0	0.59	-0.54	
6,481.0	16.00	334.50	6,206.0	1,574.8	-893.6	1,810.7	2.11	-0.99	
6,573.0	17.40	328.20	6,294.2	1,598.0	-906.4	1,837.1	2.49	1.52	
6,665.0	17.40	330.10	6,382.0	1,621.6	-920.5	1,864.6	0.62	0.00	
6,756.0	16.80	328.70	6,468.9	1,644.6	-934.1	1,891.3	0.80	-0.66	
6,848.0	16.20	327.50	6,557.2	1,666.8	-947.9	1,917.4	0.75	-0.65	
6,940.0	13.50	327.20	6,646.1	1,686.6	-960.6	1,941.0	2.94	-2.93	
7,031.0	15.30	326.80	6,734.2	1,705.6	-972.9	1,963.6	1.98	1.98	
7,123.0	17.10	329.10	6,822.6	1,727.4	-986.5	1,989.2	2.08	1.96	
7,215.0	18.20	332.10	6,910.2	1,751.7	-1,000.2	2,017.1	1.55	1.20	
7,306.0	19.10	332.80	6,996.4	1,777.5	-1,013.6	2,046.2	1.02	0.99	
7,398.0	17.50	332.80	7,083.8	1,803.2	-1,026.8	2,075.0	1.74	-1.74	
7,490.0	18.70	334.90	7,171.2	1,828.8	-1,039.4	2,103.6	1.48	1.30	
7,581.0	17.60	334.20	7,257.7	1,854.4	-1,051.6	2,131.9	1.23	-1.21	
7,673.0	17.20	333.80	7,345.5	1,879.2	-1,063.7	2,159.3	0.45	-0.43	
7,765.0	16.10	332.10	7,433.6	1,902.7	-1,075.6	2,185.6	1.31	-1.20	
7,857.0	15.50	331.90	7,522.2	1,924.8	-1,087.4	2,210.7	0.65	-0.65	
7,948.0	15.20	330.90	7,609.9	1,945.9	-1,098.9	2,234.8	0.44	-0.33	
8,040.0	14.20	328.10	7,698.9	1,966.0	-1,110.8	2,258.1	1.33	-1.09	
8,132.0	13.40	328.00	7,788.2	1,984.7	-1,122.4	2,280.0	0.87	-0.87	
8,224.0	12.80	327.30	7,877.9	2,002.3	-1,133.5	2,300.9	0.67	-0.65	
8,314.0	12.00	334.10	7,965.8	2,019.1	-1,143.0	2,320.2	1.85	-0.89	
8,407.0	11.50	332.90	8,056.8	2,036.0	-1,151.4	2,339.1	0.60	-0.54	
8,499.0	10.30	338.40	8,147.1	2,051.8	-1,158.6	2,356.4	1.72	-1.30	
8,590.0	9.10	335.10	8,236.8	2,065.9	-1,164.7	2,371.6	1.45	-1.32	
8,682.0	7.70	344.10	8,327.9	2,078.5	-1,169.4	2,384.9	2.08	-1.52	
8,774.0	5.80	338.80	8,419.2	2,088.7	-1,172.8	2,395.5	2.17	-2.07	
8,865.0	3.50	346.60	8,509.9	2,095.7	-1,175.1	2,402.7	2.62	-2.53	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8504A-25 F25 496
Project:	Story Gulch	TVD Reference:	KBE @ 8320.0ft (Patterson 306)
Site:	F25 496	MD Reference:	KBE @ 8320.0ft (Patterson 306)
Well:	8504A-25 F25 496	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	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
8,957.0	3.00	340.90	8,601.8	2,100.7	-1,176.5	2,407.7	0.65	-0.54	
9,049.0	2.90	340.70	8,693.6	2,105.2	-1,178.1	2,412.4	0.11	-0.11	
9,141.0	2.80	346.20	8,785.5	2,109.6	-1,179.4	2,416.9	0.32	-0.11	
9,232.0	1.30	295.40	8,876.5	2,112.2	-1,180.9	2,419.9	2.44	-1.65	
9,324.0	1.10	210.70	8,968.5	2,111.9	-1,182.3	2,420.3	1.76	-0.22	
9,416.0	0.90	14.20	9,060.5	2,111.8	-1,182.5	2,420.3	2.15	-0.22	
9,508.0	1.50	31.70	9,152.4	2,113.5	-1,181.7	2,421.5	0.76	0.65	
9,599.0	0.70	25.00	9,243.4	2,115.0	-1,180.9	2,422.4	0.89	-0.88	
9,691.0	1.10	21.10	9,335.4	2,116.4	-1,180.3	2,423.2	0.44	0.43	
9,782.0	0.30	138.60	9,426.4	2,117.0	-1,179.8	2,423.6	1.39	-0.88	
9,966.0	0.50	184.60	9,610.4	2,115.9	-1,179.6	2,422.4	0.20	0.11	
10,149.0	0.70	223.60	9,793.4	2,114.3	-1,180.4	2,421.4	0.24	0.11	
10,241.0	0.70	212.70	9,885.4	2,113.4	-1,181.1	2,421.0	0.14	0.00	
10,333.0	0.50	4.80	9,977.4	2,113.3	-1,181.4	2,421.1	1.27	-0.22	
10,424.0	0.50	312.20	10,068.4	2,114.0	-1,181.6	2,421.8	0.49	0.00	
10,516.0	1.10	282.20	10,160.4	2,114.4	-1,182.8	2,422.8	0.77	0.65	
10,606.0	1.40	275.60	10,250.3	2,114.7	-1,184.7	2,424.0	0.37	0.33	
10,698.0	0.50	314.10	10,342.3	2,115.1	-1,186.1	2,425.0	1.15	-0.98	
10,790.0	0.90	304.10	10,434.3	2,115.8	-1,187.0	2,426.0	0.45	0.43	
10,881.0	0.50	45.30	10,525.3	2,116.5	-1,187.3	2,426.8	1.22	-0.44	
10,972.0	0.20	28.20	10,616.3	2,116.9	-1,187.0	2,426.9	0.35	-0.33	
11,064.0	0.40	269.10	10,708.3	2,117.0	-1,187.2	2,427.2	0.57	0.22	
11,155.0	1.00	263.20	10,799.3	2,116.9	-1,188.3	2,427.6	0.66	0.66	
11,247.0	1.30	282.90	10,891.3	2,117.1	-1,190.1	2,428.7	0.53	0.33	
11,339.0	1.20	285.10	10,983.3	2,117.5	-1,192.1	2,430.0	0.12	-0.11	
11,431.0	0.70	125.10	11,075.3	2,117.5	-1,192.6	2,430.2	2.04	-0.54	
11,522.0	0.50	145.90	11,166.3	2,116.8	-1,191.9	2,429.3	0.32	-0.22	
11,614.0	0.70	131.40	11,258.3	2,116.1	-1,191.2	2,428.4	0.27	0.22	
11,706.0	0.60	137.60	11,350.3	2,115.4	-1,190.5	2,427.4	0.13	-0.11	
11,798.0	0.40	143.20	11,442.2	2,114.8	-1,190.0	2,426.6	0.22	-0.22	
11,981.0	0.60	260.80	11,625.2	2,114.1	-1,190.5	2,426.3	0.47	0.11	
12,073.0	0.90	276.80	11,717.2	2,114.1	-1,191.7	2,426.9	0.39	0.33	
12,164.0	1.20	282.90	11,808.2	2,114.4	-1,193.4	2,427.9	0.35	0.33	
12,439.0	2.50	241.30	12,083.1	2,112.2	-1,201.4	2,429.9	0.65	0.47	
12,531.0	2.10	233.80	12,175.0	2,110.2	-1,204.6	2,429.8	0.54	-0.43	
12,623.0	2.00	230.80	12,266.9	2,108.2	-1,207.2	2,429.3	0.16	-0.11	
12,670.0	1.90	230.70	12,313.9	2,107.2	-1,208.4	2,429.0	0.21	-0.21	Last Cathedral Survey @ 12,670' MD
12,720.0	1.90	230.70	12,363.9	2,106.1	-1,209.7	2,428.7	0.00	0.00	Projection to Bit @ 12,720'

Cathedral Energy

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well 8504A-25 F25 496
Project: Story Gulch	TVD Reference: KBE @ 8320.0ft (Patterson 306)
Site: F25 496	MD Reference: KBE @ 8320.0ft (Patterson 306)
Well: 8504A-25 F25 496	North Reference: True
Wellbore: DD	Survey Calculation Method: Minimum Curvature
Design: DD	Database: EDM 5000.1 US Multi Users DB

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
8504A-25 F25 496 BHL	0.00	0.00	12,210.0	2,105.2	-1,185.4	1,683,248.14	2,261,539.17	39° 40' 48.10 N	108° 7' 26.53 W
- survey misses target center by 20.6ft at 12565.5ft MD (12209.5 TVD, 2109.5 N, -1205.6 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
8504A-25 F25 496 TGT	0.00	0.00	8,550.0	2,105.2	-1,185.4	1,683,248.14	2,261,539.17	39° 40' 48.10 N	108° 7' 26.53 W
- survey misses target center by 12.1ft at 8905.7ft MD (8550.5 TVD, 2098.0 N, -1175.7 E)									
- Point									

Survey Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)		
12,670.0	12,313.9	2,107.2	-1,208.4	Last Cathedral Survey @ 12,670' MD	
12,720.0	12,363.9	2,106.1	-1,209.7	Projection to Bit @ 12,720'	

Checked By: _____	Approved By: _____	Date: _____
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