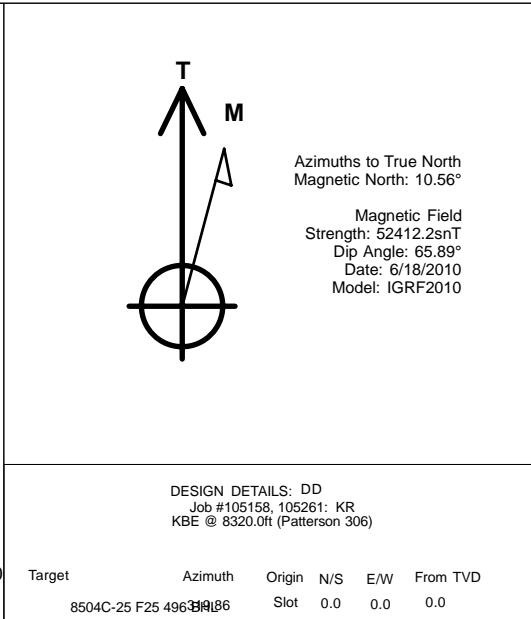
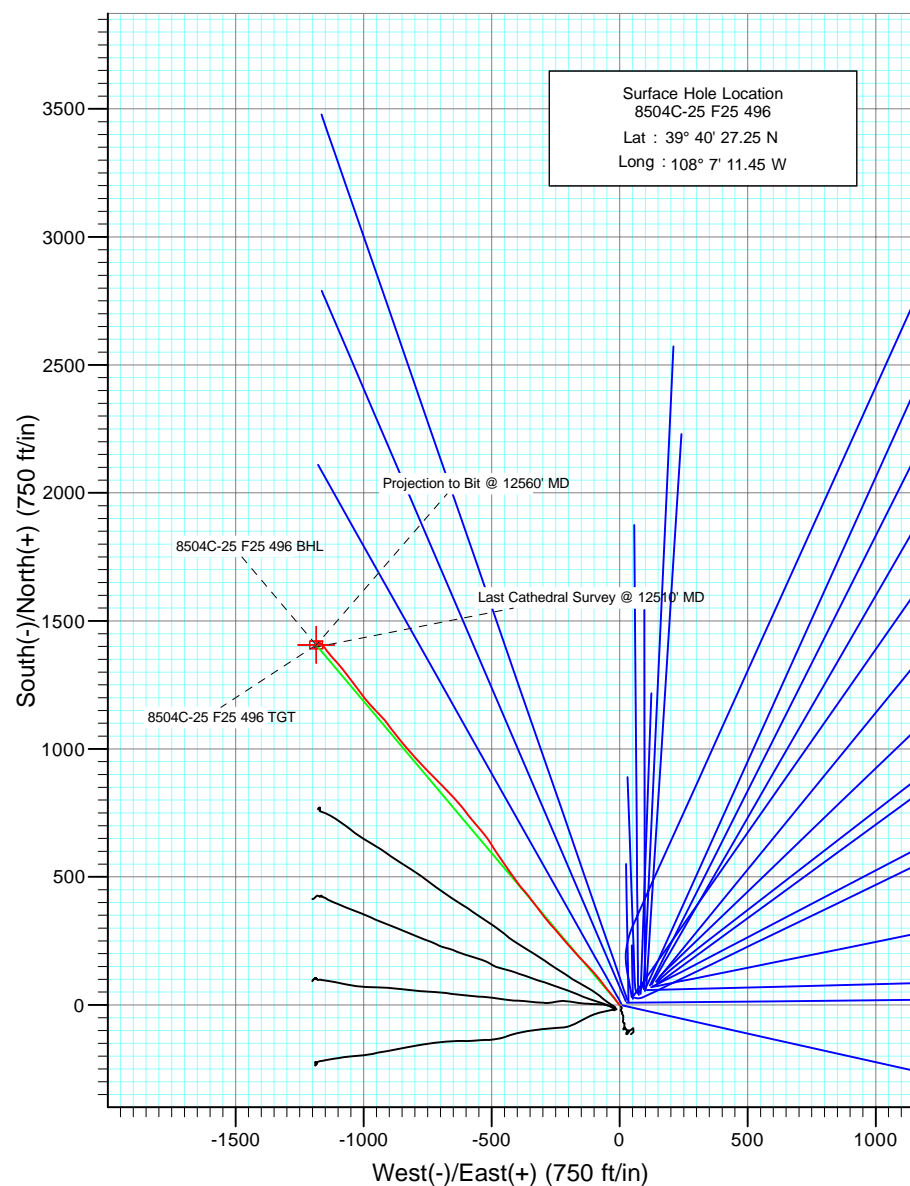
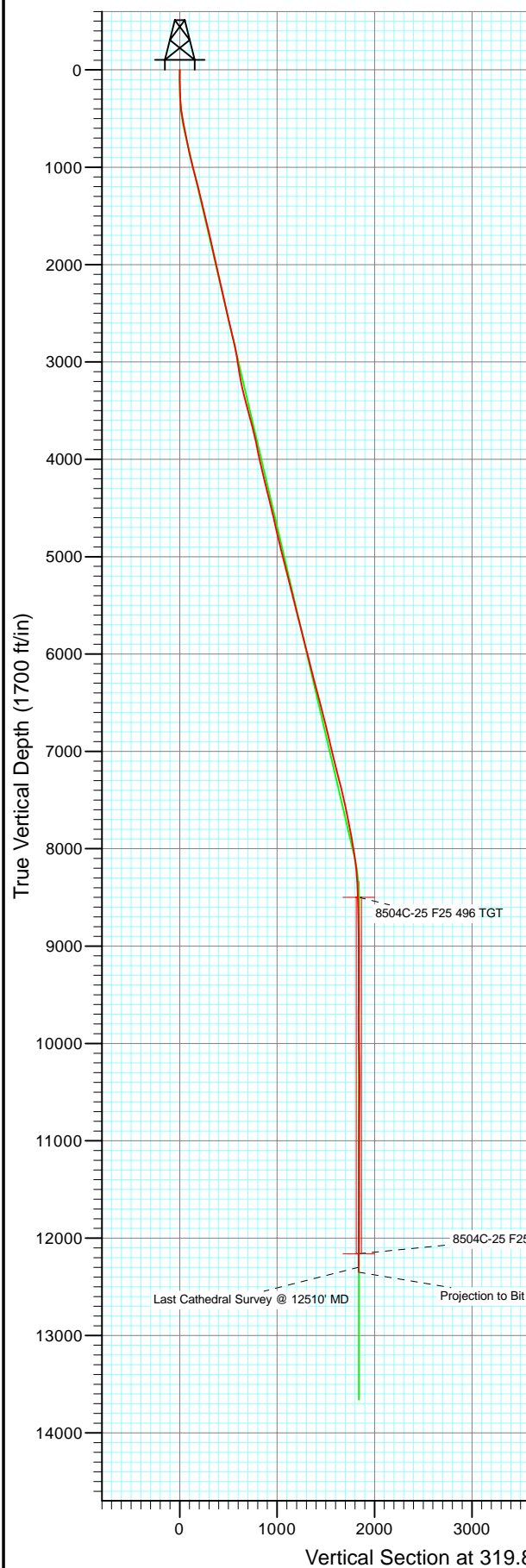


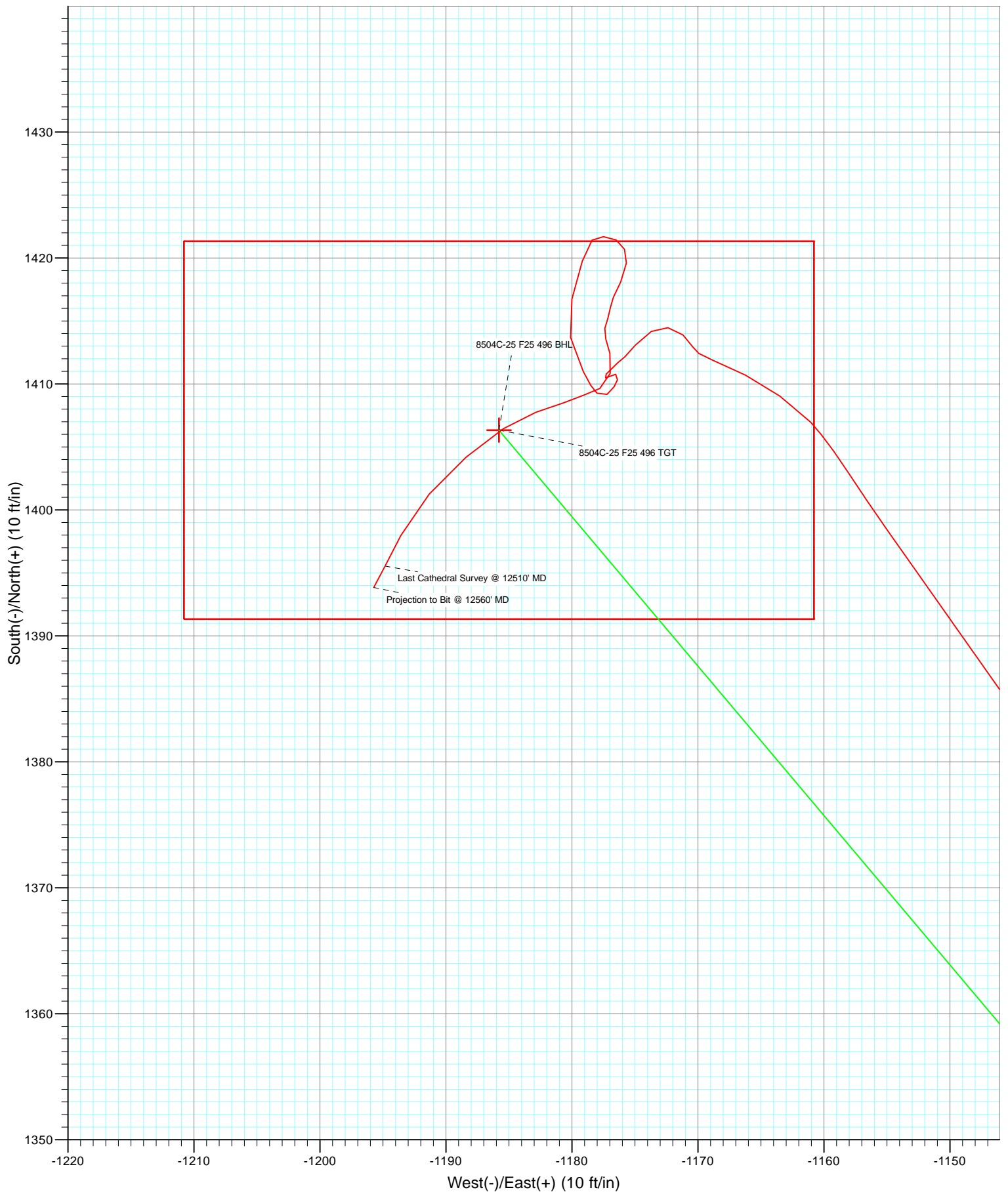


Project: Story Gulch  
 Site: F25 496  
 Well: 8504C-25 F25 496  
 Wellbore: DD  
 Design: Final





Project: Story Gulch  
Site: F25 496  
Well: 8504C-25 F25 496  
Wellbore: DD  
Design: Final



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8504C-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>	8504C-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	8504C-25 F25 496					
Well Position	+N/-S	0.0 ft	Northing:	1,681,105.47 ft	Latitude:	39° 40' 27.25 N
	+E/-W	0.0 ft	Easting:	2,262,656.57 ft	Longitude:	108° 7' 11.45 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	6/18/2010	10.56	65.89	52,412

<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</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	319.86	

<b>Survey Program</b>	<b>Date</b>	8/20/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
217.0	2,960.0	Survey #1 (DD)	MWD	Geolink MWD	
3,086.0	12,560.0	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	
217.0	1.30	297.00	217.0	1.1	-2.2	2.3	0.60	0.60	
248.0	1.80	321.40	248.0	1.7	-2.8	3.1	2.64	1.61	
279.0	2.60	322.90	278.9	2.6	-3.5	4.3	2.59	2.58	
309.0	3.50	325.10	308.9	3.9	-4.5	5.9	3.02	3.00	
340.0	4.60	326.10	339.8	5.7	-5.7	8.0	3.56	3.55	
371.0	5.70	327.10	370.7	8.0	-7.2	10.8	3.56	3.55	
402.0	6.70	326.00	401.5	10.8	-9.1	14.1	3.25	3.23	
494.0	9.60	321.70	492.6	21.3	-16.8	27.1	3.22	3.15	
586.0	11.00	320.70	583.1	34.1	-27.2	43.6	1.53	1.52	
676.0	11.60	321.40	671.4	47.8	-38.2	61.2	0.68	0.67	
802.0	11.40	322.30	794.8	67.6	-53.8	86.3	0.21	-0.16	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8504C-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>	8504C-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
897.0	13.00	321.60	887.7	83.4	-66.1	106.4	1.69	1.68	
992.0	14.50	320.30	979.9	100.9	-80.4	128.9	1.61	1.58	
1,087.0	14.80	321.40	1,071.9	119.5	-95.5	153.0	0.43	0.32	
1,182.0	14.40	316.90	1,163.8	137.6	-111.2	176.9	1.27	-0.42	
1,277.0	14.50	316.10	1,255.8	154.8	-127.5	200.6	0.24	0.11	
1,371.0	13.80	314.80	1,346.9	171.2	-143.6	223.5	0.82	-0.74	
1,467.0	13.30	317.20	1,440.3	187.4	-159.2	245.9	0.78	-0.52	
1,561.0	12.40	317.60	1,531.9	202.8	-173.4	266.8	0.96	-0.96	
1,657.0	13.40	320.00	1,625.5	218.9	-187.5	288.2	1.18	1.04	
1,752.0	13.10	320.00	1,718.0	235.6	-201.5	310.0	0.32	-0.32	
1,847.0	12.60	318.10	1,810.6	251.5	-215.3	331.1	0.69	-0.53	
1,942.0	12.60	318.30	1,903.3	267.0	-229.1	351.8	0.05	0.00	
2,037.0	12.70	319.70	1,996.0	282.7	-242.8	372.6	0.34	0.11	
2,132.0	13.20	320.40	2,088.6	299.0	-256.5	393.9	0.55	0.53	
2,227.0	12.10	317.70	2,181.3	314.7	-270.1	414.7	1.31	-1.16	
2,323.0	12.40	321.10	2,275.1	330.2	-283.3	435.1	0.81	0.31	
2,418.0	13.20	322.90	2,367.7	346.8	-296.3	456.1	0.94	0.84	
2,513.0	13.30	322.30	2,460.2	364.1	-309.5	477.9	0.18	0.11	
2,608.0	13.70	322.00	2,552.6	381.6	-323.1	500.0	0.43	0.42	
2,703.0	13.40	323.50	2,644.9	399.3	-336.6	522.2	0.49	-0.32	
2,798.0	12.50	322.10	2,737.5	416.3	-349.4	543.5	1.00	-0.95	
2,893.0	11.70	321.10	2,830.4	431.9	-361.8	563.4	0.87	-0.84	
2,960.0	10.90	320.50	2,896.1	442.1	-370.1	576.5	1.21	-1.19	Last Cathedral Survey @ 2960'
3,086.0	8.80	315.30	3,020.2	458.1	-384.5	598.1	1.81	-1.67	
3,178.0	9.00	325.60	3,111.1	469.0	-393.5	612.2	1.74	0.22	
3,269.0	11.00	323.40	3,200.7	481.9	-402.7	628.0	2.24	2.20	
3,361.0	13.30	324.80	3,290.7	497.6	-414.0	647.3	2.52	2.50	
3,453.0	14.20	325.80	3,380.0	515.6	-426.5	669.1	1.01	0.98	
3,545.0	15.30	323.80	3,469.0	534.7	-440.0	692.4	1.32	1.20	
3,637.0	16.00	327.00	3,557.6	555.1	-454.0	717.1	1.21	0.76	
3,728.0	14.10	325.10	3,645.5	574.7	-467.2	740.6	2.16	-2.09	
3,820.0	12.50	325.00	3,735.0	592.1	-479.3	761.6	1.74	-1.74	
3,912.0	12.70	328.60	3,824.8	608.9	-490.3	781.6	0.88	0.22	
4,003.0	12.40	328.50	3,913.6	625.7	-500.6	801.1	0.33	-0.33	
4,095.0	12.00	324.50	4,003.5	641.9	-511.3	820.4	1.02	-0.43	
4,187.0	13.00	324.40	4,093.4	658.2	-522.9	840.2	1.09	1.09	
4,278.0	13.80	320.30	4,181.9	674.8	-535.8	861.3	1.36	0.88	
4,370.0	14.00	317.20	4,271.2	691.4	-550.4	883.4	0.84	0.22	
4,462.0	13.60	320.20	4,360.5	707.9	-564.9	905.3	0.89	-0.43	
4,553.0	13.60	323.70	4,449.0	724.7	-578.1	926.7	0.90	0.00	
4,644.0	13.20	321.10	4,537.5	741.5	-590.9	947.8	0.79	-0.44	
4,736.0	13.00	321.80	4,627.1	757.8	-603.9	968.6	0.28	-0.22	
4,828.0	13.30	319.50	4,716.7	773.9	-617.2	989.5	0.66	0.33	
4,920.0	13.50	319.20	4,806.2	790.1	-631.1	1,010.8	0.23	0.22	
5,011.0	13.70	318.50	4,894.6	806.2	-645.1	1,032.2	0.28	0.22	
5,103.0	13.60	316.90	4,984.0	822.3	-659.8	1,053.9	0.42	-0.11	
5,195.0	14.20	316.30	5,073.3	838.3	-674.9	1,076.0	0.67	0.65	
5,286.0	13.80	313.40	5,161.6	853.9	-690.5	1,097.9	0.89	-0.44	
5,378.0	14.50	315.50	5,250.9	869.6	-706.6	1,120.3	0.94	0.76	
5,470.0	15.30	316.40	5,339.8	886.6	-723.0	1,143.9	0.91	0.87	
5,562.0	13.50	316.30	5,428.9	903.2	-738.8	1,166.7	1.96	-1.96	
5,653.0	13.80	314.30	5,517.3	918.4	-753.9	1,188.2	0.61	0.33	
5,745.0	13.90	317.00	5,606.6	934.2	-769.3	1,210.1	0.71	0.11	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8504C-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>	8504C-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
5,837.0	14.60	317.80	5,695.8	950.9	-784.6	1,232.7	0.79	0.76	
5,928.0	14.40	317.70	5,783.9	967.7	-800.0	1,255.5	0.22	-0.22	
6,020.0	14.70	315.90	5,872.9	984.6	-815.8	1,278.6	0.59	0.33	
6,112.0	14.60	320.30	5,962.0	1,001.9	-831.3	1,301.8	1.21	-0.11	
6,203.0	13.90	320.60	6,050.2	1,019.1	-845.6	1,324.2	0.77	-0.77	
6,295.0	13.90	320.00	6,139.5	1,036.2	-859.7	1,346.3	0.16	0.00	
6,387.0	14.60	323.90	6,228.6	1,054.0	-873.6	1,368.9	1.29	0.76	
6,479.0	14.60	323.70	6,317.7	1,072.7	-887.3	1,392.1	0.05	0.00	
6,570.0	14.60	324.00	6,405.7	1,091.2	-900.9	1,415.0	0.08	0.00	
6,662.0	15.30	319.20	6,494.6	1,109.8	-915.6	1,438.7	1.55	0.76	
6,754.0	14.60	316.40	6,583.5	1,127.4	-931.5	1,462.4	1.09	-0.76	
6,845.0	13.90	315.10	6,671.7	1,143.4	-947.2	1,484.7	0.85	-0.77	
6,937.0	13.10	317.30	6,761.2	1,158.9	-962.0	1,506.1	1.03	-0.87	
7,029.0	13.40	317.30	6,850.7	1,174.4	-976.3	1,527.2	0.33	0.33	
7,120.0	12.90	321.10	6,939.3	1,190.1	-989.9	1,547.9	1.10	-0.55	
7,212.0	13.30	324.40	7,028.9	1,206.7	-1,002.5	1,568.7	0.92	0.43	
7,304.0	14.50	321.40	7,118.2	1,224.3	-1,015.8	1,590.8	1.52	1.30	
7,396.0	15.00	324.10	7,207.2	1,242.9	-1,030.0	1,614.2	0.92	0.54	
7,488.0	14.20	322.90	7,296.2	1,261.6	-1,043.8	1,637.3	0.93	-0.87	
7,579.0	13.60	322.60	7,384.6	1,279.0	-1,057.0	1,659.1	0.66	-0.66	
7,671.0	12.70	321.20	7,474.2	1,295.4	-1,069.9	1,680.1	1.04	-0.98	
7,763.0	12.40	321.30	7,564.0	1,311.0	-1,082.4	1,700.0	0.33	-0.33	
7,855.0	11.90	320.40	7,653.9	1,326.0	-1,094.6	1,719.4	0.58	-0.54	
7,946.0	11.20	317.60	7,743.0	1,339.8	-1,106.6	1,737.6	0.99	-0.77	
8,038.0	10.70	317.60	7,833.4	1,352.7	-1,118.4	1,755.1	0.54	-0.54	
8,130.0	9.10	321.10	7,924.0	1,364.7	-1,128.7	1,770.9	1.86	-1.74	
8,221.0	8.80	318.20	8,013.9	1,375.5	-1,137.9	1,785.0	0.60	-0.33	
8,313.0	8.10	325.10	8,104.9	1,386.0	-1,146.3	1,798.5	1.34	-0.76	
8,405.0	6.50	324.50	8,196.1	1,395.6	-1,153.0	1,810.2	1.74	-1.74	
8,497.0	4.50	326.80	8,287.7	1,402.8	-1,158.0	1,818.9	2.19	-2.17	
8,588.0	2.00	315.40	8,378.6	1,407.0	-1,161.1	1,824.1	2.82	-2.75	
8,680.0	2.00	305.40	8,470.5	1,409.0	-1,163.5	1,827.2	0.38	0.00	
8,772.0	2.00	297.50	8,562.5	1,410.7	-1,166.2	1,830.3	0.30	0.00	
8,864.0	1.70	290.90	8,654.4	1,411.9	-1,168.9	1,832.9	0.40	-0.33	
8,955.0	0.70	337.60	8,745.4	1,412.9	-1,170.4	1,834.7	1.45	-1.10	
9,047.0	0.90	308.20	8,837.4	1,413.9	-1,171.2	1,835.9	0.49	0.22	
9,139.0	0.80	280.60	8,929.4	1,414.5	-1,172.4	1,837.1	0.45	-0.11	
9,231.0	1.00	239.20	9,021.4	1,414.2	-1,173.7	1,837.7	0.72	0.22	
9,323.0	1.10	220.80	9,113.3	1,413.1	-1,175.0	1,837.7	0.38	0.11	
9,414.0	0.50	224.20	9,204.3	1,412.1	-1,175.8	1,837.5	0.66	-0.66	
9,506.0	0.40	237.10	9,296.3	1,411.7	-1,176.4	1,837.5	0.15	-0.11	
9,598.0	1.20	221.50	9,388.3	1,410.8	-1,177.3	1,837.4	0.89	0.87	
9,689.0	0.90	54.80	9,479.3	1,410.5	-1,177.3	1,837.2	2.29	-0.33	
9,781.0	0.30	122.90	9,571.3	1,410.8	-1,176.5	1,837.0	0.91	-0.65	
9,873.0	0.40	190.20	9,663.3	1,410.3	-1,176.4	1,836.5	0.43	0.11	
9,965.0	0.40	222.70	9,755.3	1,409.8	-1,176.7	1,836.3	0.24	0.00	
10,058.0	0.60	223.30	9,848.3	1,409.2	-1,177.2	1,836.2	0.22	0.22	
10,150.0	0.80	312.40	9,940.3	1,409.3	-1,178.0	1,836.8	1.08	0.22	
10,241.0	1.80	334.90	10,031.3	1,411.0	-1,179.1	1,838.8	1.21	1.10	
10,333.0	1.80	344.00	10,123.2	1,413.7	-1,180.1	1,841.5	0.31	0.00	
10,424.0	2.20	16.50	10,214.2	1,416.7	-1,180.0	1,843.7	1.30	0.44	
10,516.0	1.70	13.80	10,306.1	1,419.7	-1,179.2	1,845.5	0.55	-0.54	
10,608.0	0.70	52.10	10,398.1	1,421.4	-1,178.4	1,846.3	1.34	-1.09	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8504C-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>	8504C-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
10,699.0	0.60	97.60	10,489.1	1,421.7	-1,177.5	1,845.9	0.56	-0.11	
10,791.0	0.70	110.60	10,581.1	1,421.4	-1,176.5	1,845.1	0.19	0.11	
10,883.0	0.70	165.20	10,673.1	1,420.7	-1,175.8	1,844.1	0.70	0.00	
10,974.0	0.70	179.10	10,764.1	1,419.6	-1,175.7	1,843.1	0.19	0.00	
11,066.0	1.30	206.20	10,856.1	1,418.1	-1,176.1	1,842.3	0.81	0.65	
11,158.0	0.40	204.30	10,948.1	1,416.9	-1,176.7	1,841.7	0.98	-0.98	
11,250.0	0.60	190.10	11,040.1	1,416.1	-1,176.9	1,841.3	0.25	0.22	
11,341.0	0.60	197.00	11,131.0	1,415.2	-1,177.2	1,840.7	0.08	0.00	
11,433.0	0.40	196.70	11,223.0	1,414.4	-1,177.4	1,840.3	0.22	-0.22	
11,525.0	0.70	162.70	11,315.0	1,413.6	-1,177.3	1,839.6	0.47	0.33	
11,616.0	0.80	165.60	11,406.0	1,412.4	-1,177.0	1,838.5	0.12	0.11	
11,708.0	1.20	188.20	11,498.0	1,410.8	-1,177.0	1,837.3	0.60	0.43	
11,800.0	0.90	249.70	11,590.0	1,409.6	-1,177.8	1,836.9	1.20	-0.33	
11,892.0	0.80	244.60	11,682.0	1,409.1	-1,179.0	1,837.3	0.14	-0.11	
11,984.0	1.40	251.90	11,774.0	1,408.5	-1,180.7	1,837.9	0.67	0.65	
12,075.0	1.50	250.70	11,864.9	1,407.8	-1,182.9	1,838.7	0.11	0.11	
12,167.0	2.10	237.90	11,956.9	1,406.5	-1,185.4	1,839.4	0.78	0.65	
12,259.0	2.60	228.30	12,048.8	1,404.2	-1,188.4	1,839.6	0.69	0.54	
12,350.0	2.60	221.30	12,139.7	1,401.3	-1,191.3	1,839.2	0.35	0.00	
12,442.0	2.40	207.00	12,231.6	1,398.0	-1,193.6	1,838.2	0.71	-0.22	
12,510.0	2.20	207.80	12,299.6	1,395.5	-1,194.8	1,837.1	0.30	-0.29	Last Cathedral Survey @ 12510' MD
12,560.0	2.20	207.80	12,349.6	1,393.8	-1,195.7	1,836.4	0.00	0.00	Projection to Bit @ 12560' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
8504C-25 F25 496 TGT	0.00	0.00	8,500.0	1,406.3	-1,185.8	1,682,545.41	2,261,511.83	39° 40' 41.15 N	108° 7' 26.62 W
- hit/miss target									
- Shape									
- actual wellpath misses target center by 21.7ft at 8710.1ft MD (8500.6 TVD, 1409.6 N, -1164.4 E)									
- Point									
8504C-25 F25 496 BHL	0.00	0.00	12,160.0	1,406.3	-1,185.8	1,682,545.41	2,261,511.83	39° 40' 41.15 N	108° 7' 26.62 W
- actual wellpath misses target center by 8.4ft at 12369.9ft MD (12159.6 TVD, 1400.6 N, -1191.9 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)	
2,960.0	2,896.1	442.1	-370.1	Last Cathedral Survey @ 2960'
12,510.0	12,299.6	1,395.5	-1,194.8	Last Cathedral Survey @ 12510' MD
12,560.0	12,349.6	1,393.8	-1,195.7	Projection to Bit @ 12560' MD

Checked By: _____	Approved By: _____	Date: _____
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