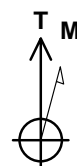
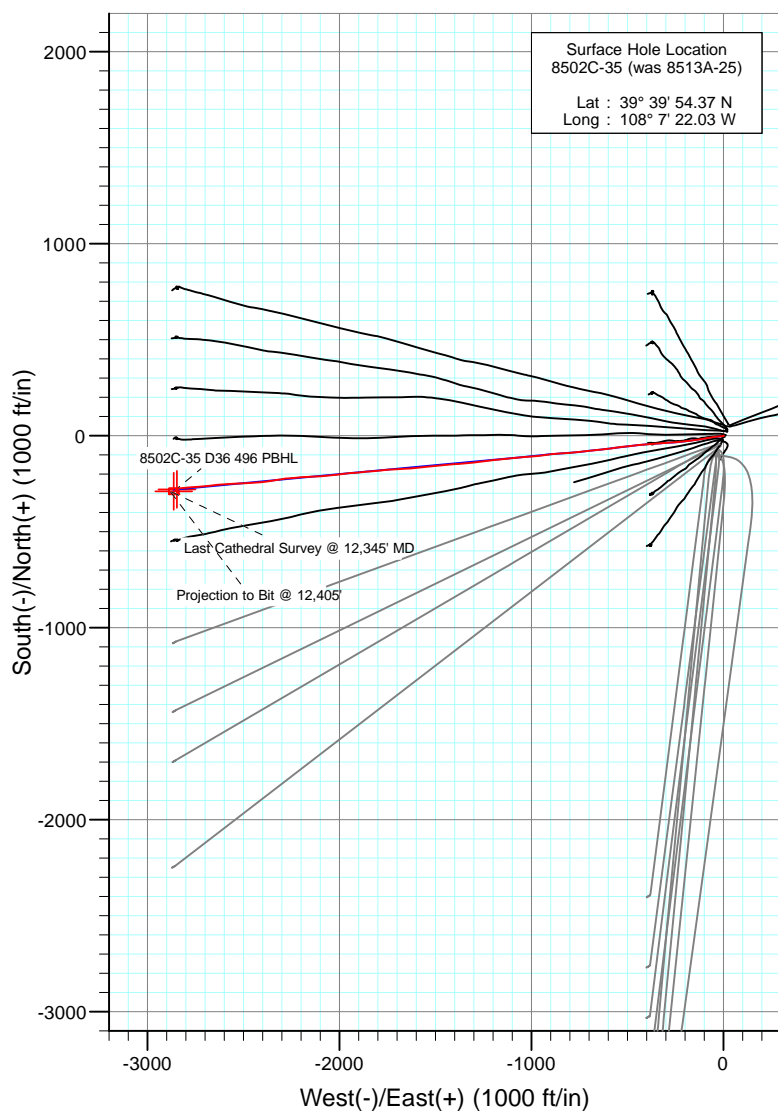
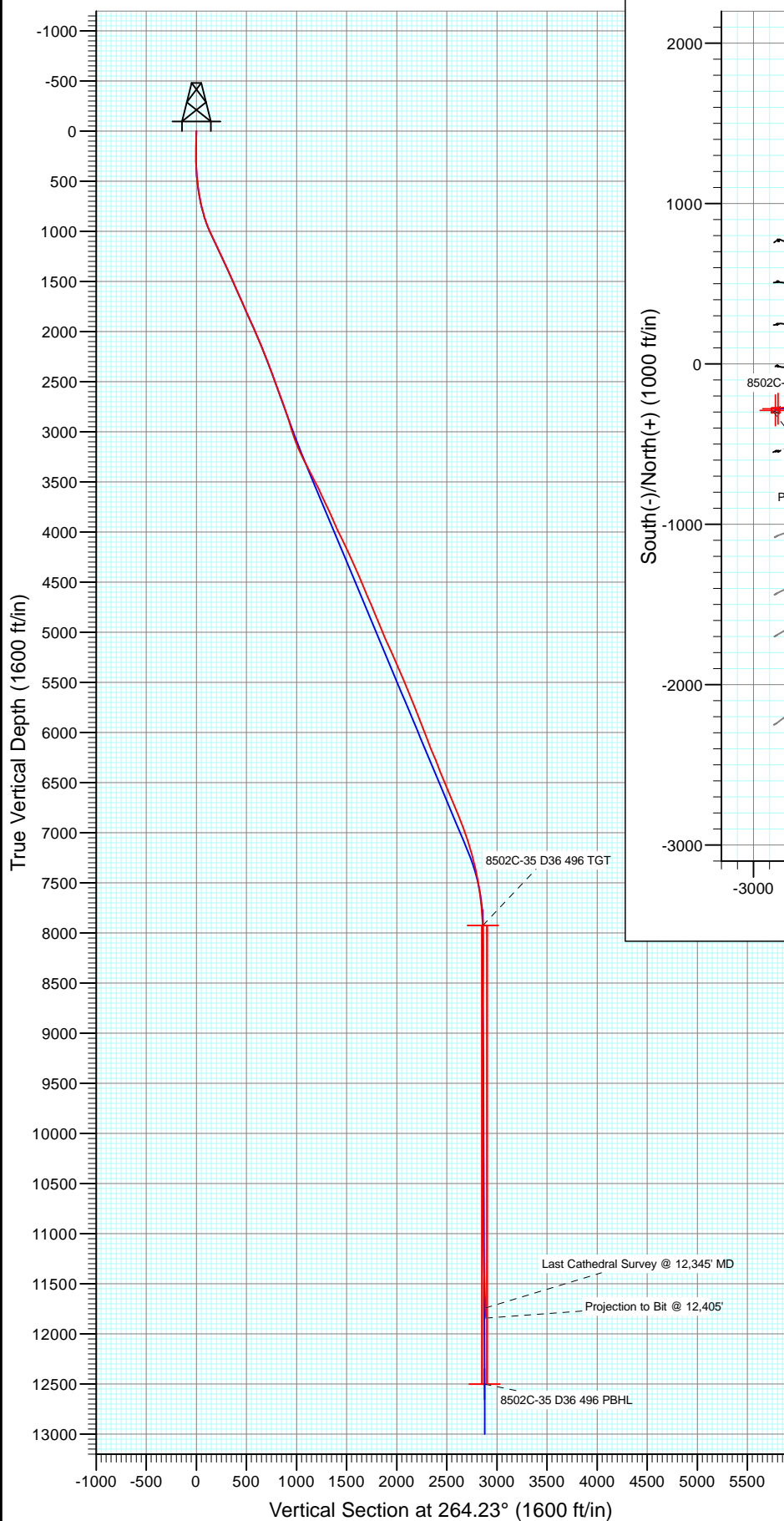




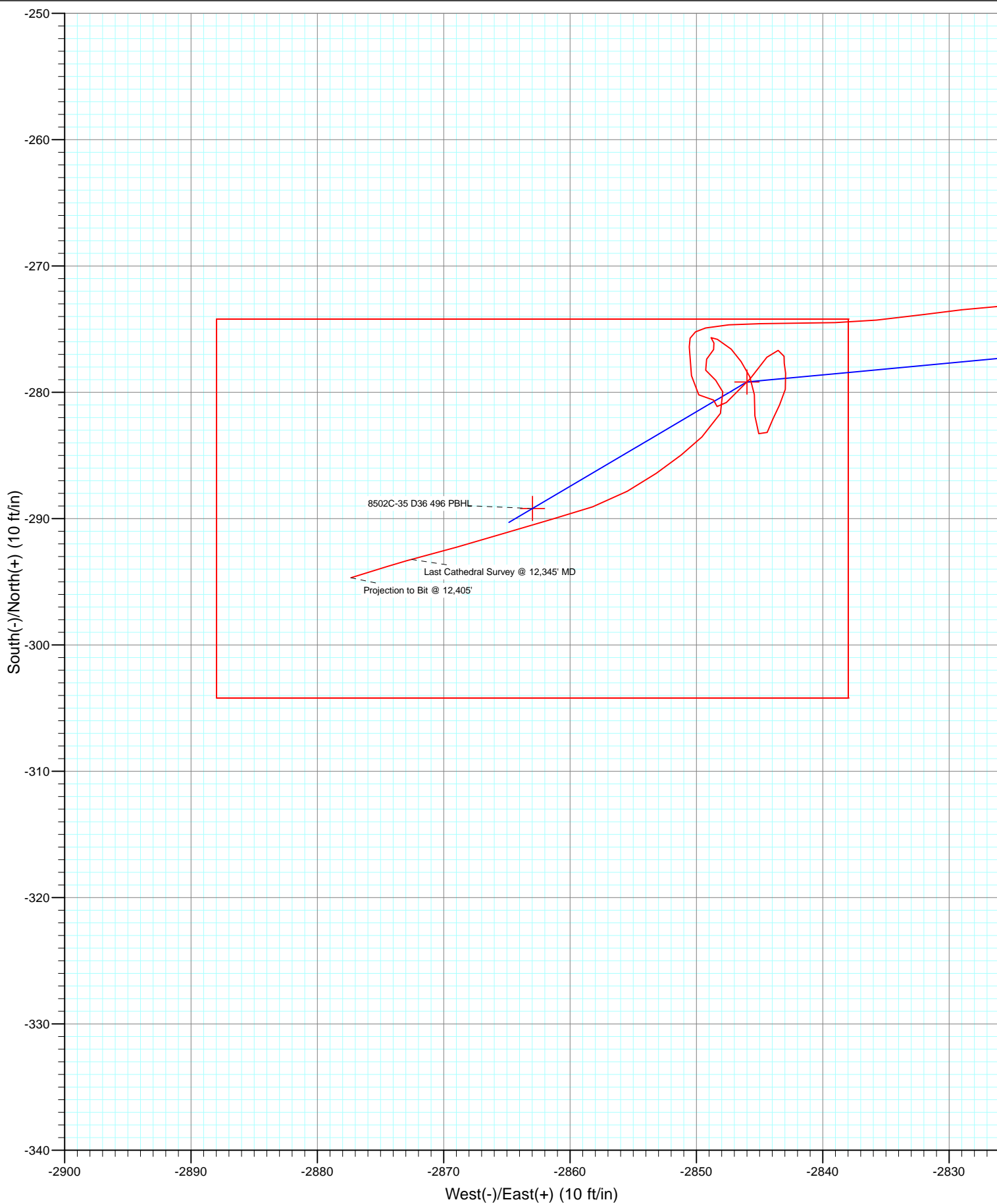
Project: Story Gulch  
 Site: S36-T4S-R96W (D36 496)  
 Well: 8502C-35 (was 8513A-25)  
 Wellbore: DD  
 Design: FINAL



Azimuths to True North  
 Magnetic North: 10.22°

Magnetic Field  
 Strength: 52146.5nT  
 Dip Angle: 65.81°  
 Date: 1/16/2013  
 Model: IGRF2010

DD								
8502C-35 (was 8513A-25)								
125494/185055 (SH) 135060/206855 (MH); SC								
KB=32 @ 8323.0ft (Patterson #326)								
GL @ 8291.0								
North American Datum 1983								
Well 8502C-35 (was 8513A-25), True North								
Type	Target		Azimuth	Origin	Type	N/S	E/W	From TVD
Target	8502C-35 D36 496 PBHL		264.23	Slot		0.0	0.0	0.0
8502C-35 D36 496 TGT			-279.2	-2846.0	39° 39' 51.61 N			
8502C-35 D36 496 PBHL			-289.2	-2863.0	39° 39' 51.51 N			
						Latitude	Longitude	
						108° 7' 58.42 W	108° 7' 58.64 W	



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8502C-35 (was 8513A-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB=32' @ 8323.0ft (Patterson #326)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB=32' @ 8323.0ft (Patterson #326)
<b>Well:</b>	8502C-35 (was 8513A-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	USA EDM 5000 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		S36-T4S-R96W (D36 496)			
Site Position:		Northing:	1,590,537.44 ft	Latitude:	39° 25' 42.24 N
From:	Lat/Long	Easting:	2,297,786.47 ft	Longitude:	107° 59' 10.64 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.57 °

Well	8502C-35 (was 8513A-25)					
Well Position	+N/-S	0.0 ft	Northing:	1,677,803.62 ft	Latitude:	39° 39' 54.37 N
	+E/-W	0.0 ft	Easting:	2,261,733.92 ft	Longitude:	108° 7' 22.03 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,291.0 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	1/16/2013	10.22	65.81	52,147

<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	264.23	

<b>Survey Program</b>	<b>Date</b>	2/19/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
179.0	12,405.0	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		
179.0	1.10	85.10	179.0	0.1	1.7	-1.7	0.61	0.61		
209.0	1.10	86.80	209.0	0.2	2.3	-2.3	0.11	0.00		
239.0	0.70	92.40	239.0	0.2	2.8	-2.8	1.36	-1.33		
269.0	0.30	192.60	269.0	0.1	2.9	-2.9	2.70	-1.33		
300.0	1.00	231.30	300.0	-0.1	2.7	-2.7	2.54	2.26		
329.0	1.90	243.60	329.0	-0.5	2.1	-2.0	3.27	3.10		
360.0	2.80	250.50	359.9	-1.0	0.9	-0.8	3.04	2.90		
390.0	3.60	258.80	389.9	-1.4	-0.7	0.9	3.07	2.67		
420.0	4.10	259.50	419.8	-1.8	-2.7	2.9	1.67	1.67		
451.0	4.70	263.00	450.7	-2.2	-5.1	5.2	2.12	1.94		
481.0	5.50	265.20	480.6	-2.4	-7.7	7.9	2.74	2.67		
512.0	6.60	265.80	511.4	-2.7	-11.0	11.2	3.55	3.55		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8502C-35 (was 8513A-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB=32' @ 8323.0ft (Patterson #326)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB=32' @ 8323.0ft (Patterson #326)
<b>Well:</b>	8502C-35 (was 8513A-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	USA EDM 5000 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
560.0	7.80	265.60	559.1	-3.1	-17.0	17.2	2.50	2.50	
606.0	9.00	262.10	604.6	-3.9	-23.6	23.9	2.83	2.61	
651.0	9.90	263.80	649.0	-4.8	-31.0	31.3	2.09	2.00	
697.0	11.20	260.90	694.2	-5.9	-39.3	39.7	3.05	2.83	
743.0	12.40	260.10	739.2	-7.5	-48.6	49.1	2.63	2.61	
789.0	14.30	263.20	784.0	-9.0	-59.1	59.7	4.41	4.13	
836.0	16.10	263.30	829.3	-10.4	-71.3	72.0	3.83	3.83	
881.0	17.60	261.70	872.4	-12.1	-84.3	85.1	3.49	3.33	
927.0	19.50	261.30	916.0	-14.3	-98.7	99.7	4.14	4.13	
973.0	21.70	260.90	959.0	-16.8	-114.7	115.8	4.79	4.78	
1,064.0	25.90	260.60	1,042.3	-22.7	-151.0	152.5	4.62	4.62	
1,156.0	25.50	262.40	1,125.2	-28.6	-190.4	192.3	0.95	-0.43	
1,247.0	25.60	265.60	1,207.3	-32.7	-229.4	231.6	1.52	0.11	
1,338.0	24.50	266.70	1,289.7	-35.3	-267.9	270.1	1.31	-1.21	
1,430.0	24.90	265.60	1,373.3	-37.9	-306.2	308.5	0.66	0.43	
1,522.0	24.00	266.70	1,457.1	-40.5	-344.2	346.5	1.10	-0.98	
1,613.0	23.70	264.30	1,540.3	-43.3	-380.9	383.3	1.12	-0.33	
1,705.0	24.30	264.50	1,624.3	-47.0	-418.1	420.7	0.66	0.65	
1,797.0	23.60	264.70	1,708.4	-50.5	-455.3	458.1	0.77	-0.76	
1,890.0	22.90	263.00	1,793.9	-54.4	-491.8	494.8	1.04	-0.75	
1,981.0	24.30	263.30	1,877.3	-58.8	-528.0	531.2	1.54	1.54	
2,073.0	24.10	261.60	1,961.2	-63.7	-565.4	568.9	0.79	-0.22	
2,164.0	23.30	263.50	2,044.5	-68.5	-601.6	605.5	1.22	-0.88	
2,256.0	22.80	264.10	2,129.2	-72.4	-637.4	641.5	0.60	-0.54	
2,347.0	22.50	264.60	2,213.1	-75.8	-672.3	676.5	0.39	-0.33	
2,439.0	21.50	263.50	2,298.4	-79.4	-706.6	711.0	1.18	-1.09	
2,530.0	20.40	262.80	2,383.4	-83.3	-738.9	743.5	1.24	-1.21	
2,622.0	19.60	264.00	2,469.9	-86.9	-770.1	775.0	0.98	-0.87	
2,713.0	20.30	265.90	2,555.4	-89.6	-801.1	806.0	1.05	0.77	
2,805.0	20.50	266.80	2,641.6	-91.6	-833.1	838.1	0.40	0.22	
2,896.0	19.80	266.30	2,727.1	-93.5	-864.4	869.4	0.79	-0.77	
2,970.0	18.90	264.10	2,796.9	-95.6	-888.8	893.9	1.56	-1.22	
3,071.0	16.80	261.50	2,893.0	-99.4	-919.5	924.8	2.22	-2.08	
3,163.0	17.10	263.00	2,981.0	-103.0	-946.1	951.6	0.58	0.33	
3,254.0	18.90	264.60	3,067.6	-106.0	-974.0	979.8	2.05	1.98	
3,346.0	23.10	265.50	3,153.4	-108.9	-1,006.9	1,012.7	4.58	4.57	
3,437.0	26.00	265.60	3,236.2	-111.8	-1,044.6	1,050.5	3.19	3.19	
3,528.0	26.90	264.00	3,317.7	-115.5	-1,084.9	1,091.0	1.26	0.99	
3,620.0	28.00	263.00	3,399.3	-120.3	-1,127.1	1,133.4	1.30	1.20	
3,711.0	27.00	265.00	3,480.0	-124.7	-1,168.8	1,175.5	1.50	-1.10	
3,802.0	27.10	264.60	3,561.1	-128.4	-1,210.1	1,216.8	0.23	0.11	
3,893.0	23.70	261.60	3,643.3	-133.1	-1,248.8	1,255.8	3.99	-3.74	
3,985.0	25.60	263.20	3,726.9	-138.1	-1,286.8	1,294.2	2.19	2.07	
4,076.0	25.00	265.10	3,809.2	-142.1	-1,325.5	1,333.1	1.11	-0.66	
4,168.0	23.10	264.60	3,893.2	-145.4	-1,362.9	1,370.6	2.08	-2.07	
4,260.0	24.90	266.00	3,977.2	-148.5	-1,400.1	1,408.0	2.05	1.96	
4,351.0	26.50	265.50	4,059.2	-151.4	-1,439.5	1,447.4	1.77	1.76	
4,443.0	25.90	264.50	4,141.8	-155.0	-1,480.0	1,488.0	0.81	-0.65	
4,534.0	25.10	263.20	4,223.9	-159.2	-1,518.9	1,527.2	1.07	-0.88	
4,626.0	23.90	263.90	4,307.6	-163.4	-1,556.8	1,565.4	1.34	-1.30	
4,717.0	23.60	265.00	4,390.9	-167.0	-1,593.3	1,602.0	0.59	-0.33	
4,809.0	22.80	265.20	4,475.5	-170.1	-1,629.4	1,638.2	0.87	-0.87	
4,901.0	22.50	267.30	4,560.4	-172.4	-1,664.8	1,673.6	0.94	-0.33	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8502C-35 (was 8513A-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB=32' @ 8323.0ft (Patterson #326)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB=32' @ 8323.0ft (Patterson #326)
<b>Well:</b>	8502C-35 (was 8513A-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	USA EDM 5000 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
4,993.0	24.00	267.00	4,644.9	-174.2	-1,701.0	1,709.9	1.64	1.63	
5,085.0	23.30	265.40	4,729.2	-176.7	-1,737.8	1,746.8	1.03	-0.76	
5,176.0	22.30	263.80	4,813.1	-180.0	-1,772.9	1,782.1	1.29	-1.10	
5,268.0	23.00	264.80	4,898.0	-183.5	-1,808.2	1,817.5	0.87	0.76	
5,359.0	22.20	265.80	4,982.0	-186.3	-1,843.1	1,852.4	0.98	-0.88	
5,451.0	23.10	263.70	5,066.9	-189.6	-1,878.3	1,887.9	1.32	0.98	
5,542.0	25.30	265.60	5,149.9	-193.1	-1,915.5	1,925.2	2.56	2.42	
5,634.0	24.70	265.20	5,233.3	-196.2	-1,954.2	1,964.0	0.68	-0.65	
5,726.0	23.30	262.60	5,317.3	-200.1	-1,991.4	2,001.4	1.91	-1.52	
5,818.0	23.20	263.50	5,401.8	-204.5	-2,027.5	2,037.8	0.40	-0.11	
5,909.0	21.90	264.60	5,485.9	-208.1	-2,062.2	2,072.7	1.50	-1.43	
6,001.0	21.70	265.50	5,571.3	-211.1	-2,096.2	2,106.8	0.42	-0.22	
6,092.0	22.80	268.40	5,655.5	-212.9	-2,130.6	2,141.2	1.71	1.21	
6,184.0	21.80	267.80	5,740.6	-214.1	-2,165.5	2,176.0	1.11	-1.09	
6,275.0	23.00	265.60	5,824.8	-216.1	-2,200.1	2,210.7	1.61	1.32	
6,367.0	21.40	264.70	5,910.0	-219.0	-2,234.7	2,245.4	1.78	-1.74	
6,458.0	19.80	264.20	5,995.1	-222.1	-2,266.6	2,277.5	1.77	-1.76	
6,550.0	21.00	261.10	6,081.4	-226.2	-2,298.4	2,309.5	1.75	1.30	
6,642.0	22.90	260.40	6,166.7	-231.8	-2,332.3	2,343.8	2.08	2.07	
6,733.0	22.80	259.80	6,250.6	-237.8	-2,367.2	2,379.1	0.28	-0.11	
6,824.0	20.70	265.90	6,335.1	-242.1	-2,400.6	2,412.7	3.39	-2.31	
6,916.0	22.10	267.50	6,420.7	-244.0	-2,434.1	2,446.3	1.65	1.52	
7,008.0	23.20	267.70	6,505.6	-245.5	-2,469.5	2,481.6	1.20	1.20	
7,099.0	21.80	265.90	6,589.7	-247.4	-2,504.2	2,516.4	1.71	-1.54	
7,191.0	23.60	266.80	6,674.6	-249.7	-2,539.7	2,551.9	1.99	1.96	
7,283.0	22.80	266.80	6,759.1	-251.7	-2,575.8	2,588.1	0.87	-0.87	
7,375.0	21.80	265.00	6,844.3	-254.2	-2,610.7	2,623.0	1.32	-1.09	
7,466.0	21.00	264.30	6,929.0	-257.3	-2,643.7	2,656.2	0.92	-0.88	
7,558.0	18.40	263.90	7,015.6	-260.5	-2,674.6	2,687.2	2.83	-2.83	
7,649.0	17.60	264.40	7,102.1	-263.3	-2,702.5	2,715.3	0.90	-0.88	
7,741.0	16.50	265.40	7,190.1	-265.7	-2,729.4	2,742.3	1.24	-1.20	
7,832.0	14.20	266.80	7,277.8	-267.4	-2,753.4	2,766.4	2.56	-2.53	
7,924.0	12.40	266.90	7,367.4	-268.6	-2,774.6	2,787.5	1.96	-1.96	
8,015.0	11.20	261.10	7,456.4	-270.5	-2,793.1	2,806.1	1.85	-1.32	
8,107.0	9.10	266.90	7,547.0	-272.2	-2,809.2	2,822.3	2.54	-2.28	
8,198.0	7.20	266.90	7,637.1	-272.9	-2,822.0	2,835.2	2.09	-2.09	
8,290.0	5.20	261.80	7,728.5	-273.8	-2,831.9	2,845.1	2.25	-2.17	
8,381.0	3.80	268.70	7,819.3	-274.5	-2,839.0	2,852.2	1.65	-1.54	
8,472.0	3.60	269.80	7,910.1	-274.6	-2,844.9	2,858.1	0.23	-0.22	
8,564.0	1.90	257.70	8,002.0	-274.9	-2,849.3	2,862.5	1.94	-1.85	
8,655.0	1.50	171.00	8,092.9	-276.4	-2,850.6	2,863.9	2.58	-0.44	
8,746.0	1.40	181.00	8,183.9	-278.7	-2,850.4	2,864.0	0.30	-0.11	
8,837.0	0.90	123.20	8,274.9	-280.2	-2,849.8	2,863.5	1.31	-0.55	
8,929.0	0.70	92.80	8,366.9	-280.6	-2,848.6	2,862.4	0.50	-0.22	
9,020.0	0.70	209.00	8,457.9	-281.1	-2,848.4	2,862.2	1.31	0.00	
9,112.0	1.60	51.00	8,549.9	-280.8	-2,847.6	2,861.4	2.46	0.98	
9,203.0	1.80	39.60	8,640.8	-278.9	-2,845.7	2,859.4	0.43	0.22	
9,294.0	0.90	34.80	8,731.8	-277.2	-2,844.4	2,857.9	1.00	-0.99	
9,386.0	0.60	96.90	8,823.8	-276.7	-2,843.5	2,856.9	0.89	-0.33	
9,478.0	0.50	182.00	8,915.8	-277.1	-2,843.1	2,856.5	0.81	-0.11	
9,569.0	0.20	171.70	9,006.8	-277.7	-2,843.0	2,856.6	0.34	-0.33	
9,661.0	0.80	172.00	9,098.8	-278.5	-2,842.9	2,856.5	0.65	0.65	
9,753.0	0.80	189.50	9,190.8	-279.8	-2,843.0	2,856.7	0.26	0.00	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8502C-35 (was 8513A-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB=32' @ 8323.0ft (Patterson #326)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB=32' @ 8323.0ft (Patterson #326)
<b>Well:</b>	8502C-35 (was 8513A-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	USA EDM 5000 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
9,844.0	0.90	210.40	9,281.8	-281.0	-2,843.4	2,857.3	0.36	0.11	
9,936.0	0.60	197.50	9,373.8	-282.1	-2,843.9	2,857.9	0.37	-0.33	
10,027.0	0.90	207.10	9,464.8	-283.2	-2,844.4	2,858.5	0.36	0.33	
10,119.0	0.80	329.10	9,556.7	-283.3	-2,845.1	2,859.1	1.62	-0.11	
10,210.0	1.10	1.00	9,647.7	-281.9	-2,845.4	2,859.3	0.66	0.33	
10,301.0	1.00	355.90	9,738.7	-280.2	-2,845.4	2,859.2	0.15	-0.11	
10,392.0	0.90	334.20	9,829.7	-278.8	-2,845.8	2,859.4	0.41	-0.11	
10,484.0	0.80	325.90	9,921.7	-277.6	-2,846.5	2,859.9	0.17	-0.11	
10,575.0	0.80	316.20	10,012.7	-276.6	-2,847.2	2,860.6	0.15	0.00	
10,667.0	0.90	296.20	10,104.7	-275.8	-2,848.3	2,861.6	0.34	0.11	
10,758.0	0.30	141.60	10,195.7	-275.7	-2,848.8	2,862.1	1.29	-0.66	
10,850.0	0.30	161.10	10,287.7	-276.1	-2,848.6	2,861.9	0.11	0.00	
10,941.0	0.40	198.90	10,378.7	-276.6	-2,848.6	2,862.0	0.27	0.11	
11,033.0	0.80	224.40	10,470.7	-277.4	-2,849.2	2,862.6	0.51	0.43	
11,124.0	0.70	137.50	10,561.7	-278.2	-2,849.3	2,862.8	1.14	-0.11	
11,216.0	0.70	133.30	10,653.7	-279.0	-2,848.5	2,862.1	0.06	0.00	
11,308.0	0.70	164.50	10,745.6	-280.0	-2,847.9	2,861.6	0.41	0.00	
11,582.0	1.20	227.10	11,019.6	-283.5	-2,849.6	2,863.6	0.39	0.18	
11,674.0	1.50	230.80	11,111.6	-285.0	-2,851.2	2,865.4	0.34	0.33	
11,765.0	1.60	236.10	11,202.6	-286.4	-2,853.2	2,867.5	0.19	0.11	
11,856.0	1.80	240.00	11,293.5	-287.8	-2,855.5	2,869.9	0.25	0.22	
11,947.0	2.00	251.20	11,384.5	-289.1	-2,858.2	2,872.8	0.46	0.22	
12,039.0	2.20	254.60	11,476.4	-290.0	-2,861.4	2,876.1	0.26	0.22	
12,130.0	2.60	252.90	11,567.3	-291.1	-2,865.1	2,879.8	0.45	0.44	
12,222.0	2.40	254.60	11,659.2	-292.2	-2,868.9	2,883.8	0.23	-0.22	
12,305.0	2.76	254.78	11,742.2	-293.2	-2,872.5	2,887.5	0.44	0.44	Last Cathedral Survey @ 12,345' MD
12,313.0	2.80	254.80	11,750.1	-293.3	-2,872.9	2,887.9	0.44	0.44	
12,345.0	2.90	252.60	11,782.1	-293.8	-2,874.4	2,889.4	0.46	0.31	
12,405.0	2.90	252.60	11,842.0	-294.7	-2,877.3	2,892.4	0.00	0.00	Projection to Bit @ 12,405'

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8502C-35 (was 8513A-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB=32' @ 8323.0ft (Patterson #326)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB=32' @ 8323.0ft (Patterson #326)
<b>Well:</b>	8502C-35 (was 8513A-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	USA EDM 5000 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									
8502C-35 D36 496 TGT	0.00	0.00	7,925.0	-279.2	-2,846.0	1,677,606.71	2,258,881.04	39° 39' 51.61 N	108° 7' 58.42 W
- actual wellpath misses target center by 4.6ft at 8487.0ft MD (7925.0 TVD, -274.6 N, -2845.8 E)									
- Point									
8502C-35 D36 496 PBH	0.00	0.00	12,502.0	-289.2	-2,863.0	1,677,597.19	2,258,863.80	39° 39' 51.51 N	108° 7' 58.64 W
- actual wellpath misses target center by 660.2ft at 12405.0ft MD (11842.0 TVD, -294.7 N, -2877.3 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
12,305.0	11,742.2	-293.2	-2,872.5	Last Cathedral Survey @ 12,345' MD
12,405.0	11,842.0	-294.7	-2,877.3	Projection to Bit @ 12,405'

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