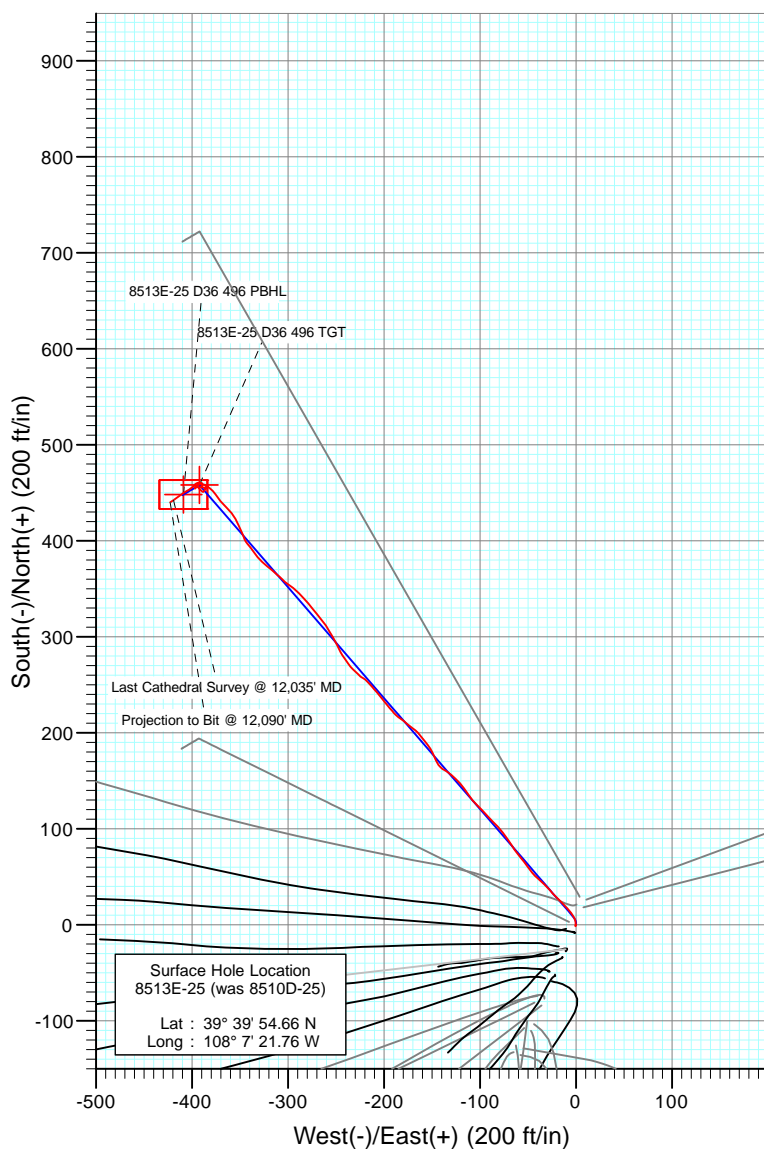
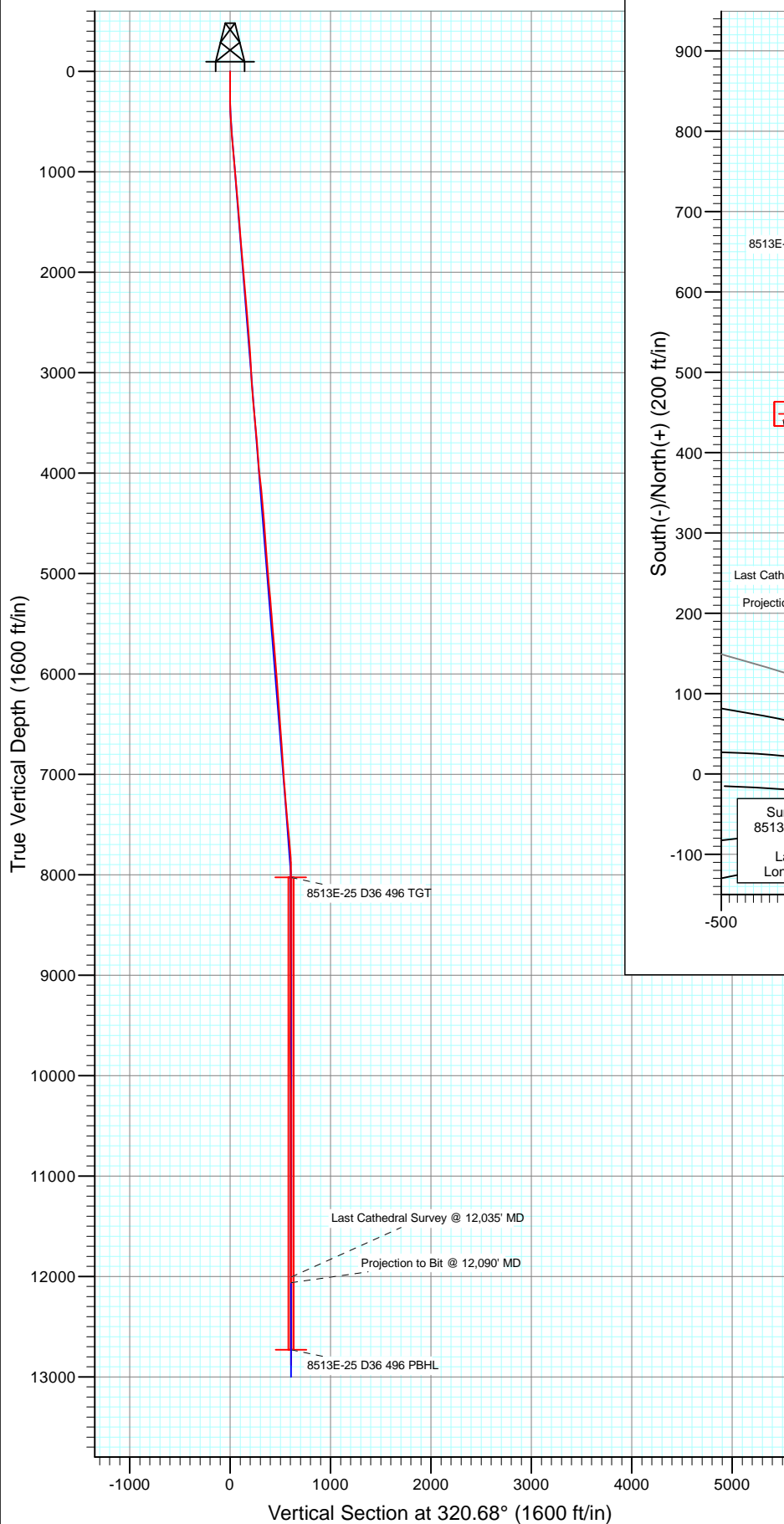




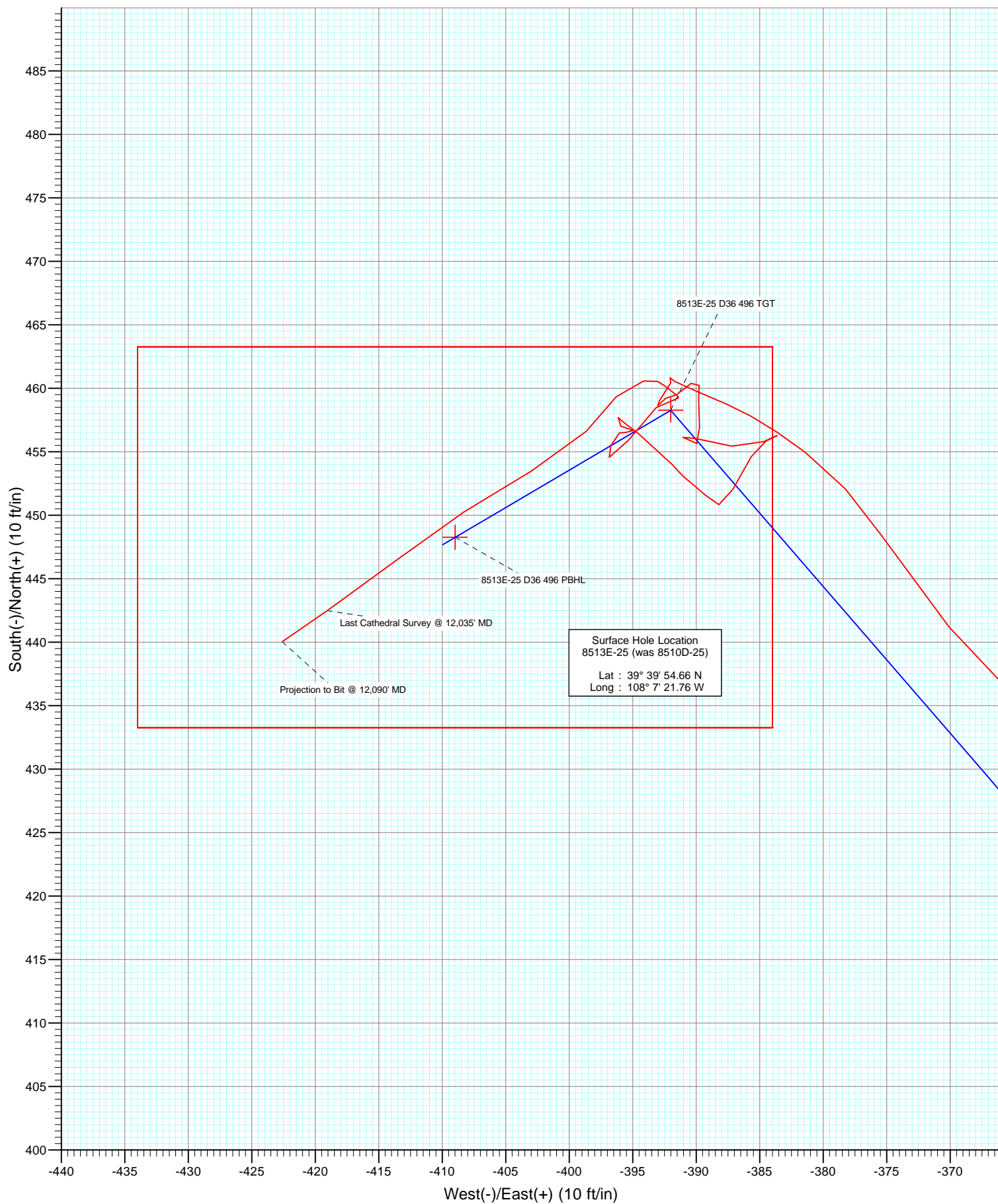
Project: Story Gulch  
 Site: S36-T4S-R96W (D36 496)  
 Well: 8513E-25 (was 8510D-25)  
 Wellbore: DD  
 Design: FINAL



Azimuths to True North  
 Magnetic North: 10.24°

Magnetic Field  
 Strength: 52160.3snT  
 Dip Angle: 65.82°  
 Date: 11/27/2012  
 Model: IGRF2010

FINAL							
8513E-25 (was 8510D-25)							
125525/185655 (SH) 125628/206255 (MH): SC							
KB @ 8324.0ft (Patterson 306)							
GL @ 8291.0							
North American Datum 1983							
Well 8513E-25 (was 8510D-25), True North							
Type	Target	Azimuth	Origin	Type	N/S	E/W	From TVD
User	No Target (Freehand)	320.68	Slot		0.0	0.0	0.0
		TVD	+N/-S	+E/-W	Latitude	Longitude	
8513E-25 D36 496 TGT		8027.0	458.3	-392.0	39° 39' 59.19 N	108° 7' 26.77 W	
8513E-25 D36 496 PBHL		12730.0	448.3	-409.0	39° 39' 59.09 N	108° 7' 26.99 W	



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8513E-25 (was 8510D-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Well:</b>	8513E-25 (was 8510D-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<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		

<b>Site</b>	S36-T4S-R96W (D36 496)			
<b>Site Position:</b>		<b>Northing:</b>	1,677,701.75 ft	<b>Latitude:</b> 39° 39' 53.35 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,261,687.16 ft	<b>Longitude:</b> 108° 7' 22.59 W
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.65 °

<b>Well</b>	8513E-25 (was 8510D-25)			
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,677,832.35 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,261,755.87 ft
<b>Position Uncertainty</b>	0.0 ft		<b>Wellhead Elevation:</b>	ft
			<b>Ground Level:</b>	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	11/27/2012	10.24	65.82	52,160

<b>Design</b>	FINAL				
<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	320.68	

<b>Survey Program</b>	<b>Date</b>	12/5/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
210.0	2,970.0	Survey #1 (DD)	MWD	Geolink MWD	
3,075.0	12,090.0	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		
210.0	0.60	200.00	210.0	-1.0	-0.4	-0.6	0.29	0.29		
241.0	0.40	210.40	241.0	-1.3	-0.5	-0.7	0.71	-0.65		
271.0	0.10	0.30	271.0	-1.3	-0.5	-0.7	1.63	-1.00		
302.0	0.70	0.50	302.0	-1.1	-0.5	-0.5	1.94	1.94		
332.0	1.40	8.10	332.0	-0.6	-0.5	-0.1	2.37	2.33		
363.0	2.20	5.20	363.0	0.4	-0.4	0.5	2.60	2.58		
393.0	2.50	359.30	392.9	1.6	-0.3	1.5	1.28	1.00		
423.0	2.90	353.10	422.9	3.0	-0.4	2.6	1.65	1.33		
454.0	3.30	345.40	453.9	4.7	-0.8	4.1	1.86	1.29		
484.0	3.50	340.00	483.8	6.4	-1.3	5.7	1.26	0.67		
515.0	3.90	334.00	514.8	8.2	-2.1	7.7	1.79	1.29		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8513E-25 (was 8510D-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Well:</b>	8513E-25 (was 8510D-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<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
546.0	4.70	323.50	545.7	10.2	-3.3	9.9	3.61	2.58	
609.0	5.00	319.40	608.4	14.3	-6.6	15.3	0.73	0.48	
701.0	4.90	316.90	700.1	20.2	-11.9	23.2	0.26	-0.11	
792.0	4.50	315.70	790.8	25.6	-17.0	30.6	0.45	-0.44	
884.0	4.10	316.40	882.5	30.6	-21.8	37.5	0.44	-0.43	
976.0	5.10	316.90	974.2	36.0	-26.9	44.9	1.09	1.09	
1,067.0	5.80	314.40	1,064.8	42.1	-32.9	53.5	0.81	0.77	
1,159.0	5.40	310.60	1,156.4	48.2	-39.6	62.4	0.59	-0.43	
1,251.0	5.10	321.10	1,248.0	54.2	-45.4	70.7	1.09	-0.33	
1,342.0	4.70	325.30	1,338.7	60.4	-50.1	78.5	0.59	-0.44	
1,434.0	4.10	320.60	1,430.4	66.1	-54.3	85.5	0.76	-0.65	
1,506.0	3.80	319.60	1,502.2	69.9	-57.5	90.5	0.43	-0.42	
1,617.0	4.10	324.60	1,613.0	75.9	-62.2	98.1	0.41	0.27	
1,709.0	5.20	327.20	1,704.7	82.1	-66.3	105.5	1.22	1.20	
1,801.0	5.60	325.80	1,796.2	89.3	-71.1	114.1	0.46	0.43	
1,892.0	5.10	322.30	1,886.9	96.2	-76.1	122.6	0.66	-0.55	
1,984.0	4.50	316.70	1,978.5	102.0	-81.1	130.3	0.83	-0.65	
2,075.0	5.00	314.10	2,069.2	107.4	-86.4	137.8	0.60	0.55	
2,167.0	5.40	318.20	2,160.8	113.4	-92.1	146.1	0.59	0.43	
2,258.0	5.10	316.70	2,251.5	119.5	-97.7	154.4	0.36	-0.33	
2,350.0	4.40	312.10	2,343.1	124.9	-103.2	162.0	0.87	-0.76	
2,441.0	4.30	321.50	2,433.9	129.9	-107.9	168.9	0.79	-0.11	
2,533.0	4.80	326.40	2,525.6	135.8	-112.2	176.1	0.69	0.54	
2,625.0	4.70	324.40	2,617.3	142.1	-116.5	183.7	0.21	-0.11	
2,716.0	4.30	317.40	2,708.0	147.6	-121.0	190.9	0.75	-0.44	
2,807.0	3.90	314.90	2,798.8	152.3	-125.5	197.3	0.48	-0.44	
2,899.0	3.60	309.50	2,890.6	156.4	-129.9	203.3	0.50	-0.33	
2,970.0	3.20	307.50	2,961.4	159.0	-133.2	207.4	0.59	-0.56	
3,075.0	2.40	293.00	3,066.3	161.6	-137.6	212.2	1.01	-0.76	
3,167.0	4.30	317.00	3,158.2	164.9	-141.7	217.3	2.52	2.07	
3,257.0	5.80	336.30	3,247.8	171.5	-145.8	225.1	2.50	1.67	
3,349.0	5.40	335.00	3,339.4	179.7	-149.5	233.8	0.46	-0.43	
3,440.0	6.50	322.20	3,429.9	187.7	-154.5	243.1	1.89	1.21	
3,532.0	5.00	319.90	3,521.4	194.8	-160.3	252.3	1.65	-1.63	
3,622.0	4.00	320.60	3,611.1	200.3	-164.8	259.3	1.11	-1.11	
3,714.0	4.50	302.90	3,702.9	204.7	-169.8	266.0	1.52	0.54	
3,806.0	5.60	313.10	3,794.5	209.7	-176.1	273.9	1.54	1.20	
3,897.0	4.10	301.10	3,885.2	214.5	-182.2	281.3	1.98	-1.65	
3,989.0	4.60	315.40	3,977.0	218.8	-187.6	288.1	1.29	0.54	
4,080.0	7.20	319.50	4,067.5	225.7	-193.8	297.4	2.89	2.86	
4,171.0	6.70	321.90	4,157.8	234.2	-200.8	308.5	0.64	-0.55	
4,263.0	6.00	320.50	4,249.2	242.2	-207.2	318.6	0.78	-0.76	
4,354.0	4.70	316.90	4,339.8	248.6	-212.8	327.1	1.47	-1.43	
4,445.0	3.90	317.80	4,430.6	253.6	-217.4	333.9	0.88	-0.88	
4,537.0	3.30	299.00	4,522.4	257.2	-221.8	339.5	1.43	-0.65	
4,628.0	4.80	313.70	4,613.2	261.1	-226.9	345.7	1.99	1.65	
4,720.0	4.60	312.40	4,704.9	266.2	-232.4	353.2	0.25	-0.22	
4,811.0	5.00	328.80	4,795.5	272.1	-237.1	360.7	1.56	0.44	
4,903.0	4.20	321.40	4,887.2	278.1	-241.3	368.1	1.08	-0.87	
4,994.0	4.90	332.70	4,978.0	284.2	-245.2	375.2	1.25	0.77	
5,086.0	5.60	332.90	5,069.6	291.7	-249.0	383.4	0.76	0.76	
5,177.0	4.90	330.40	5,160.2	299.0	-252.9	391.6	0.81	-0.77	
5,268.0	4.50	330.80	5,250.9	305.5	-256.6	398.9	0.44	-0.44	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8513E-25 (was 8510D-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Well:</b>	8513E-25 (was 8510D-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<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
5,359.0	5.00	325.70	5,341.6	311.9	-260.6	406.4	0.72	0.55	
5,451.0	4.70	321.00	5,433.2	318.1	-265.2	414.2	0.54	-0.33	
5,542.0	4.00	321.40	5,524.0	323.5	-269.5	421.1	0.77	-0.77	
5,633.0	5.10	321.30	5,614.7	329.2	-274.0	428.3	1.21	1.21	
5,724.0	4.40	318.70	5,705.4	334.9	-278.9	435.8	0.80	-0.77	
5,816.0	4.20	319.20	5,797.1	340.1	-283.4	442.7	0.22	-0.22	
5,908.0	5.20	314.30	5,888.8	345.6	-288.6	450.2	1.17	1.09	
5,999.0	4.80	308.30	5,979.5	350.8	-294.5	458.0	0.72	-0.44	
6,090.0	4.30	303.40	6,070.2	355.1	-300.4	465.0	0.70	-0.55	
6,181.0	5.00	317.40	6,160.9	359.9	-305.9	472.2	1.46	0.77	
6,273.0	4.40	306.90	6,252.6	364.9	-311.4	479.7	1.14	-0.65	
6,364.0	4.20	315.20	6,343.3	369.4	-316.6	486.4	0.72	-0.22	
6,455.0	4.30	306.00	6,434.1	373.8	-321.7	493.0	0.76	0.11	
6,546.0	4.30	313.80	6,524.8	378.1	-326.9	499.7	0.64	0.00	
6,637.0	4.10	320.10	6,615.6	383.0	-331.5	506.3	0.55	-0.22	
6,729.0	3.90	325.70	6,707.3	388.1	-335.3	512.7	0.48	-0.22	
6,820.0	3.60	322.40	6,798.1	392.9	-338.8	518.7	0.41	-0.33	
6,912.0	2.90	316.00	6,890.0	396.9	-342.2	523.9	0.86	-0.76	
7,003.0	4.20	338.60	6,980.8	401.6	-345.0	529.3	2.07	1.43	
7,094.0	5.20	337.50	7,071.5	408.6	-347.8	536.5	1.10	1.10	
7,186.0	5.10	333.40	7,163.1	416.1	-351.2	544.4	0.41	-0.11	
7,277.0	4.50	333.00	7,253.8	422.9	-354.7	551.9	0.66	-0.66	
7,368.0	4.70	321.60	7,344.5	429.0	-358.6	559.1	1.03	0.22	
7,460.0	5.30	312.80	7,436.2	434.8	-364.1	567.1	1.06	0.65	
7,551.0	5.80	320.30	7,526.8	441.2	-370.1	575.8	0.97	0.55	
7,643.0	5.70	326.80	7,618.3	448.6	-375.6	585.0	0.72	-0.11	
7,734.0	5.40	307.20	7,708.9	455.0	-381.4	593.7	2.10	-0.33	
7,826.0	3.60	293.00	7,800.6	458.7	-387.5	600.4	2.29	-1.96	
8,009.0	0.50	100.00	7,983.5	460.8	-392.1	604.9	2.23	-1.69	
8,052.5	0.25	168.30	8,027.0	460.7	-391.8	604.7	1.08	-0.58	8513E-25 D36 496 TGT
8,100.0	0.60	226.00	8,074.5	460.4	-392.0	604.6	1.08	0.74	
8,192.0	1.50	206.80	8,166.5	459.0	-392.9	604.1	1.04	0.98	
8,283.0	1.00	30.30	8,257.5	458.6	-393.0	603.9	2.75	-0.55	
8,375.0	0.30	122.20	8,349.5	459.2	-392.4	603.9	1.15	-0.76	
8,467.0	1.00	58.20	8,441.5	459.5	-391.5	603.6	0.99	0.76	
8,559.0	0.80	43.90	8,533.5	460.4	-390.4	603.5	0.33	-0.22	
8,651.0	0.80	163.40	8,625.5	460.2	-389.8	603.0	1.50	0.00	
8,742.0	0.70	202.50	8,716.4	459.1	-389.8	602.2	0.56	-0.11	
8,834.0	2.10	170.00	8,808.4	456.9	-389.7	600.4	1.69	1.52	
8,925.0	0.80	305.30	8,899.4	455.7	-390.0	599.6	3.00	-1.43	
9,017.0	0.70	281.30	8,991.4	456.1	-391.0	600.7	0.36	-0.11	
9,108.0	1.90	97.30	9,082.4	456.1	-390.1	600.0	2.86	1.32	
9,200.0	1.80	106.80	9,174.3	455.4	-387.2	597.7	0.35	-0.11	
9,292.0	1.70	55.30	9,266.3	455.8	-384.7	596.4	1.66	-0.11	
9,475.0	1.00	227.70	9,449.3	456.3	-383.6	596.1	1.47	-0.38	
9,566.0	0.40	285.60	9,540.3	455.8	-384.5	596.3	0.94	-0.66	
9,658.0	1.90	212.60	9,632.3	454.6	-385.7	596.1	1.98	1.63	
9,750.0	1.80	206.10	9,724.2	452.0	-387.1	595.0	0.25	-0.11	
9,841.0	0.60	278.60	9,815.2	450.8	-388.2	594.8	1.89	-1.32	
9,933.0	1.10	318.90	9,907.2	451.6	-389.3	596.0	0.82	0.54	
10,024.0	0.80	300.50	9,998.1	452.5	-390.4	597.5	0.47	-0.33	
10,114.0	1.90	319.80	10,088.1	454.0	-391.9	599.6	1.31	1.22	
10,206.0	2.60	307.00	10,180.0	456.4	-394.5	603.1	0.93	0.76	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well 8513E-25 (was 8510D-25)
<b>Project:</b>	Story Gulch	<b>TVD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Site:</b>	S36-T4S-R96W (D36 496)	<b>MD Reference:</b>	KB @ 8324.0ft (Patterson 306)
<b>Well:</b>	8513E-25 (was 8510D-25)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<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
10,298.0	0.10	77.00	10,272.0	457.7	-396.1	605.1	2.90	-2.72	
10,389.0	0.90	170.20	10,363.0	457.0	-395.9	604.4	1.00	0.88	
10,480.0	0.90	48.80	10,454.0	456.8	-395.3	603.8	1.72	0.00	
10,572.0	0.80	202.80	10,546.0	456.7	-395.0	603.6	1.80	-0.11	
10,664.0	0.70	322.10	10,638.0	456.5	-395.6	603.8	1.41	-0.11	
10,756.0	0.60	194.60	10,730.0	456.5	-396.0	604.1	1.27	-0.11	
10,847.0	1.00	225.20	10,821.0	455.5	-396.7	603.8	0.63	0.44	
10,939.0	0.70	127.40	10,913.0	454.6	-396.8	603.1	1.41	-0.33	
11,031.0	2.50	32.40	11,004.9	455.9	-395.3	603.2	2.88	1.96	
11,122.0	1.80	51.40	11,095.9	458.5	-393.1	603.8	1.09	-0.77	
11,214.0	0.80	103.20	11,187.9	459.2	-391.4	603.3	1.57	-1.09	
11,305.0	0.90	291.80	11,278.9	459.4	-391.4	603.4	1.86	0.11	
11,397.0	0.80	327.40	11,370.9	460.2	-392.5	604.7	0.57	-0.11	
11,488.0	1.70	264.40	11,461.8	460.6	-394.1	606.1	1.66	0.99	
11,580.0	1.70	215.60	11,553.8	459.3	-396.3	606.5	1.53	0.00	
11,672.0	2.80	224.30	11,645.7	456.6	-398.7	605.9	1.25	1.20	
11,764.0	3.90	241.00	11,737.6	453.5	-403.0	606.2	1.59	1.20	
11,855.0	4.00	236.60	11,828.4	450.2	-408.3	607.0	0.35	0.11	
11,947.0	4.20	232.30	11,920.1	446.4	-413.7	607.5	0.40	0.22	
12,035.0	4.50	235.40	12,007.9	442.5	-419.1	607.9	0.43	0.34	Last Cathedral Survey @ 12,035' MD Projection to Bit @ 12,090' MD - 8513E-25 D36 4
12,090.0	4.50	235.40	12,062.7	440.0	-422.6	608.2	0.00	0.00	

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
8513E-25 D36 496 PBH - hit/miss target - Shape	0.00	0.00	12,730.0	448.3	-409.0	1,678,292.24	2,261,360.00	39° 39' 59.09 N	108° 7' 26.99 W
- actual wellpath misses target center by 667.5ft at 12090.0ft MD (12062.7 TVD, 440.0 N, -422.6 E) - Rectangle (sides W30.0 H50.0 D0.0)									
8513E-25 D36 496 TGT - actual wellpath misses target center by 2.4ft at 8052.5ft MD (8027.0 TVD, 460.7 N, -391.8 E) - Point	0.00	0.00	8,027.0	458.3	-392.0	1,678,301.75	2,261,377.26	39° 39' 59.19 N	108° 7' 26.77 W

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
12,035.0	12,007.9	442.5	-419.1	Last Cathedral Survey @ 12,035' MD	
12,090.0	12,062.7	440.0	-422.6	Projection to Bit @ 12,090' MD	

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