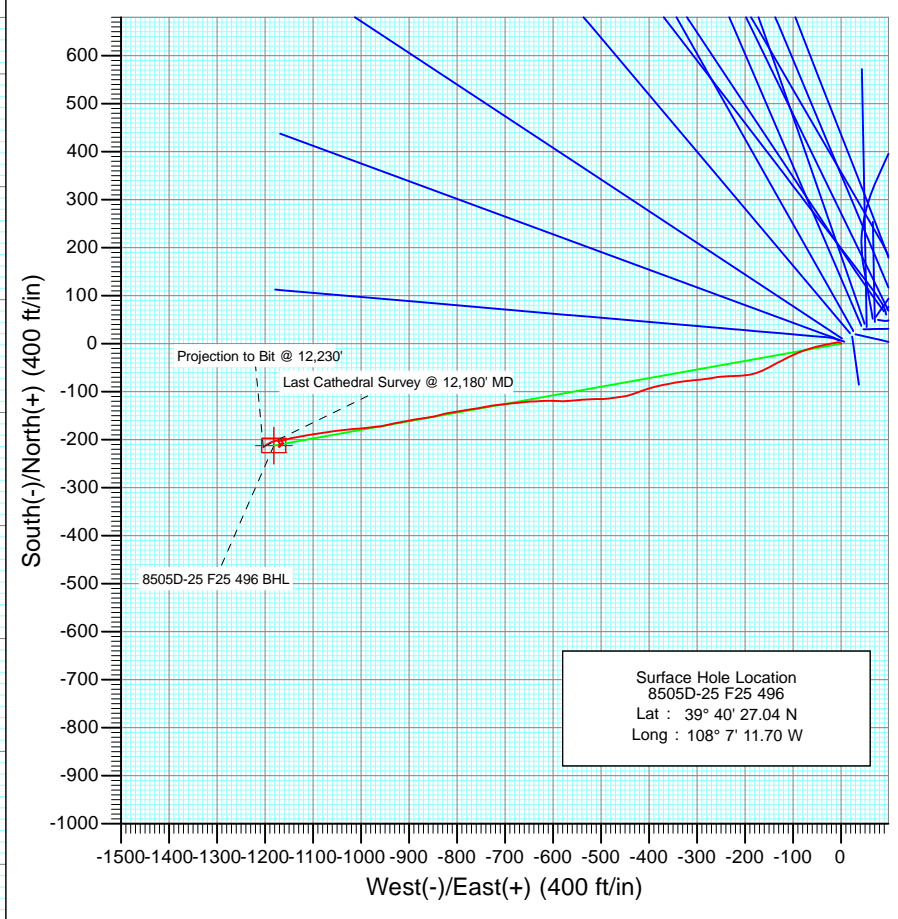
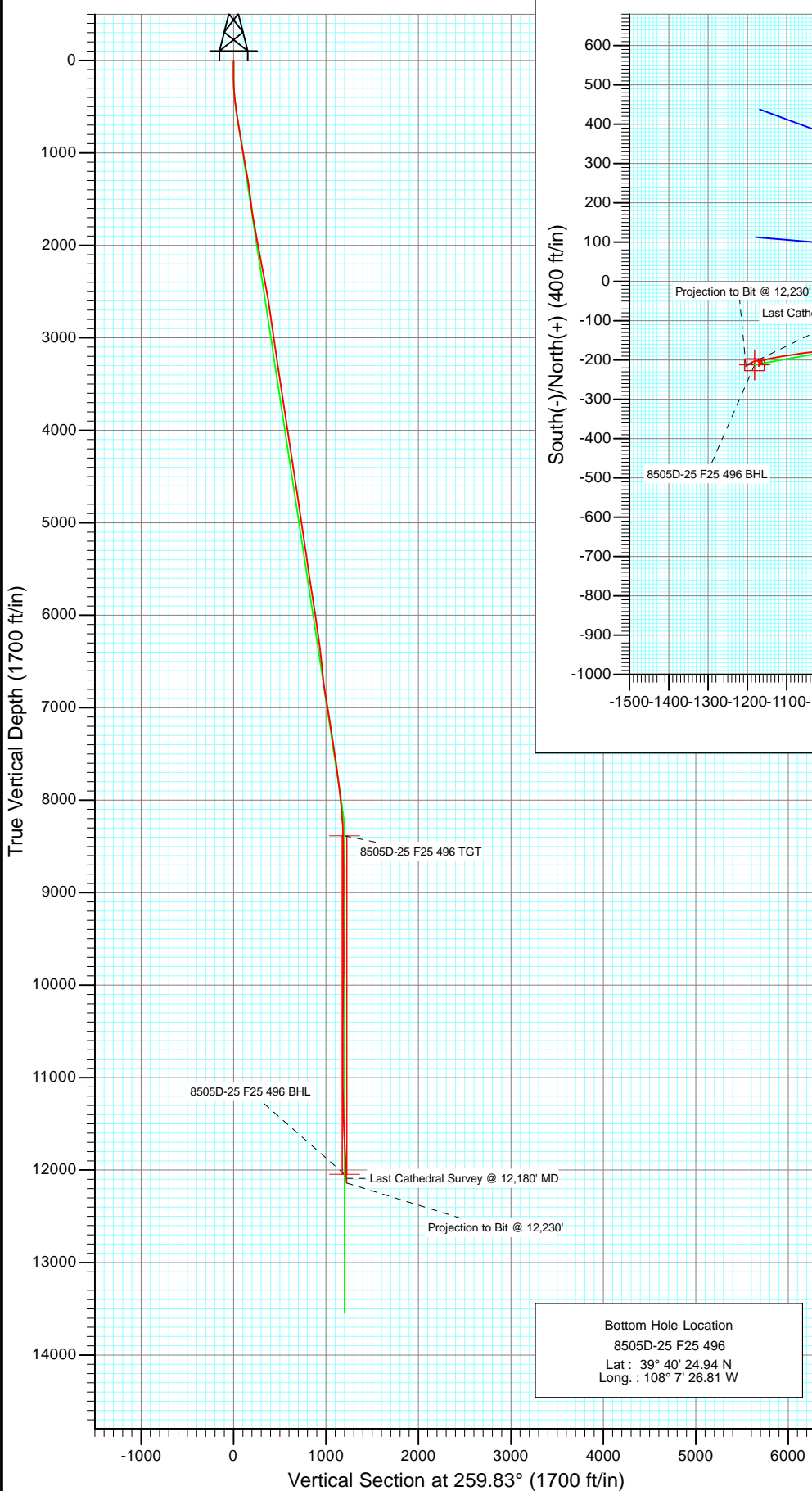


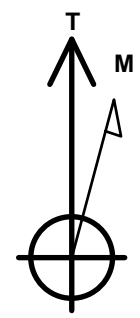


Project: Story Gulch
 Site: F25 496
 Well: 8505D-25 F25 496
 Wellbore: DD
 Design: FINAL



Surface Hole Location
 8505D-25 F25 496
 Lat : 39° 40' 27.04 N
 Long : 108° 7' 11.70 W

Bottom Hole Location
 8505D-25 F25 496
 Lat : 39° 40' 24.94 N
 Long : 108° 7' 26.81 W



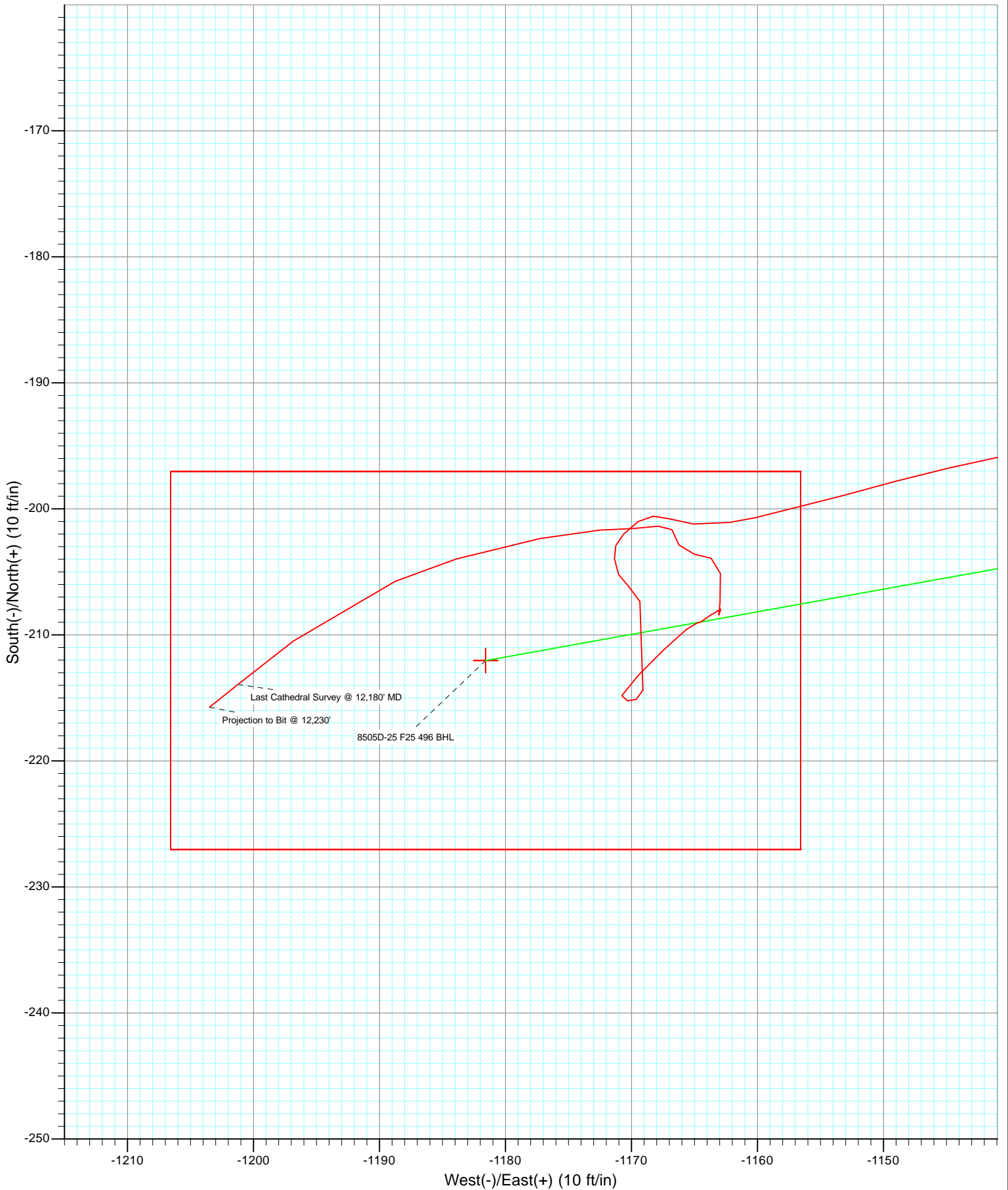
Azimuths to True North
 Magnetic North: 10.55°
 Magnetic Field
 Strength: 52451.3snT
 Dip Angle: 65.90°
 Date: 5/14/2010
 Model: IGRF200510

DESIGN DETAILS: DD
 Job #105111, 105214: LR
 KBE @ 8320.0ft (Patterson 306)

Target	Azimuth	Origin	N/S	E/W	From TVD
8505D-25 F25 496 BHL	259.83	Slot	0.0	0.0	0.0



Project: Story Gulch
Site: F25 496
Well: 8505D-25 F25 496
Wellbore: DD
Design: FINAL



Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well 8505D-25 F25 496
Project: Story Gulch	TVD Reference: KBE @ 8320.0ft (Patterson 306)
Site: F25 496	MD Reference: KBE @ 8320.0ft (Patterson 306)
Well: 8505D-25 F25 496	North Reference: True
Wellbore: DD	Survey Calculation Method: Minimum Curvature
Design: DD	Database: USA EDM 5000 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 8505D-25 F25 496					
Well Position	+N/-S 0.0 ft	Northing: 1,681,084.21 ft	Latitude: 39° 40' 27.04 N		
	+E/-W 0.0 ft	Easting: 2,262,636.79 ft	Longitude: 108° 7' 11.70 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	5/14/2010	10.55	65.90	52,451

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	259.83	

Survey Program		Date 7/26/2012
From (ft)	To (ft)	Survey (Wellbore)
199.0	2,589.0	Survey #1 (DD)
2,684.0	12,230.0	Survey #2 (DD)
		Tool Name
		MWD
		MWD
		Description
		Geolink 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
2,589.0	10.30	257.70	2,558.0	-83.8	-359.5	368.7	0.00	0.00	
2,684.0	9.20	259.20	2,651.6	-87.0	-375.3	384.7	1.19	-1.16	
2,779.0	8.50	255.30	2,745.5	-90.2	-389.5	399.3	0.97	-0.74	
2,875.0	8.30	252.60	2,840.4	-94.1	-403.0	413.3	0.46	-0.21	
2,970.0	8.30	249.80	2,934.4	-98.5	-416.0	426.8	0.43	0.00	
2,985.0	8.20	248.10	2,949.3	-99.3	-418.0	428.9	1.76	-0.67	
3,089.0	7.50	251.70	3,052.3	-104.2	-431.3	442.9	0.82	-0.67	
3,181.0	7.80	254.10	3,143.5	-107.8	-443.0	455.1	0.48	0.33	
3,272.0	8.20	262.60	3,233.6	-110.3	-455.4	467.7	1.37	0.44	
3,364.0	9.60	262.80	3,324.5	-112.1	-469.5	481.9	1.52	1.52	
3,456.0	9.00	261.10	3,415.3	-114.2	-484.2	496.8	0.72	-0.65	
3,547.0	8.50	268.50	3,505.2	-115.5	-498.0	510.5	1.35	-0.55	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8505D-25 F25 496
Project:	Story Gulch	TVD Reference:	KBE @ 8320.0ft (Patterson 306)
Site:	F25 496	MVD Reference:	KBE @ 8320.0ft (Patterson 306)
Well:	8505D-25 F25 496	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	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
3,639.0	8.60	270.40	3,596.2	-115.6	-511.7	524.0	0.33	0.11	
3,729.0	8.30	266.70	3,685.2	-115.9	-524.9	537.1	0.69	-0.33	
3,821.0	8.60	266.80	3,776.2	-116.7	-538.4	550.5	0.33	0.33	
3,912.0	8.50	263.80	3,866.2	-117.8	-551.8	564.0	0.50	-0.11	
4,004.0	8.00	265.50	3,957.3	-119.0	-565.0	577.1	0.60	-0.54	
4,096.0	8.30	269.40	4,048.3	-119.6	-578.0	590.0	0.68	0.33	
4,187.0	10.10	271.90	4,138.2	-119.4	-592.6	604.3	2.03	1.98	
4,279.0	9.50	270.40	4,228.8	-119.1	-608.2	619.7	0.71	-0.65	
4,371.0	8.70	266.80	4,319.7	-119.4	-622.7	634.0	1.07	-0.87	
4,462.0	7.80	268.00	4,409.7	-120.0	-635.8	647.0	1.01	-0.99	
4,554.0	9.10	265.70	4,500.7	-120.8	-649.3	660.4	1.46	1.41	
4,646.0	7.70	265.50	4,591.7	-121.8	-662.7	673.8	1.52	-1.52	
4,737.0	8.10	261.80	4,681.9	-123.2	-675.1	686.3	0.71	0.44	
4,829.0	8.80	264.80	4,772.9	-124.8	-688.5	699.7	0.90	0.76	
4,921.0	9.50	264.90	4,863.7	-126.1	-703.1	714.3	0.76	0.76	
5,013.0	9.10	262.40	4,954.5	-127.7	-717.9	729.1	0.62	-0.43	
5,104.0	8.10	259.80	5,044.5	-129.8	-731.3	742.7	1.18	-1.10	
5,196.0	8.60	260.70	5,135.5	-132.1	-744.5	756.1	0.56	0.54	
5,288.0	8.00	258.90	5,226.5	-134.4	-757.6	769.4	0.71	-0.65	
5,379.0	8.50	262.00	5,316.6	-136.6	-770.4	782.4	0.74	0.55	
5,471.0	7.60	259.60	5,407.7	-138.6	-783.1	795.3	1.04	-0.98	
5,563.0	8.80	260.60	5,498.7	-140.9	-796.1	808.4	1.31	1.30	
5,654.0	8.10	260.60	5,588.8	-143.0	-809.3	821.8	0.77	-0.77	
5,746.0	8.70	258.30	5,679.8	-145.5	-822.5	835.2	0.75	0.65	
5,838.0	8.40	255.40	5,770.7	-148.6	-835.8	848.9	0.57	-0.33	
5,929.0	8.30	258.20	5,860.8	-151.6	-848.7	862.1	0.46	-0.11	
6,021.0	9.40	261.70	5,951.7	-154.1	-862.6	876.2	1.33	1.20	
6,113.0	8.60	261.80	6,042.6	-156.1	-876.8	890.6	0.87	-0.87	
6,205.0	8.00	260.20	6,133.6	-158.2	-889.9	903.9	0.70	-0.65	
6,296.0	7.50	257.40	6,223.8	-160.6	-902.0	916.2	0.69	-0.55	
6,388.0	8.30	261.10	6,314.9	-162.9	-914.4	928.8	1.03	0.87	
6,480.0	6.10	256.70	6,406.2	-165.1	-925.7	940.3	2.46	-2.39	
6,571.0	5.90	258.20	6,496.7	-167.1	-935.0	949.8	0.28	-0.22	
6,663.0	4.60	257.50	6,588.3	-168.9	-943.2	958.2	1.41	-1.41	
6,755.0	7.30	257.50	6,679.8	-171.0	-952.5	967.8	2.93	2.93	
6,846.0	8.30	265.40	6,769.9	-172.8	-964.7	980.1	1.61	1.10	
6,938.0	9.40	263.80	6,860.8	-174.1	-978.8	994.2	1.23	1.20	
7,030.0	8.70	262.50	6,951.7	-175.8	-993.2	1,008.6	0.79	-0.76	
7,122.0	9.60	266.00	7,042.5	-177.3	-1,007.7	1,023.2	1.15	0.98	
7,213.0	9.20	263.60	7,132.3	-178.6	-1,022.5	1,038.0	0.62	-0.44	
7,305.0	9.00	265.40	7,223.1	-180.0	-1,037.0	1,052.5	0.38	-0.22	
7,397.0	8.90	262.40	7,314.0	-181.5	-1,051.3	1,066.8	0.52	-0.11	
7,489.0	8.80	260.80	7,404.9	-183.6	-1,065.3	1,080.9	0.29	-0.11	
7,580.0	8.20	261.30	7,494.9	-185.7	-1,078.5	1,094.4	0.66	-0.66	
7,672.0	7.70	261.60	7,586.0	-187.6	-1,091.1	1,107.1	0.55	-0.54	
7,764.0	7.20	260.50	7,677.3	-189.4	-1,102.9	1,119.0	0.57	-0.54	
7,856.0	6.60	260.40	7,768.6	-191.3	-1,113.8	1,130.1	0.65	-0.65	
7,947.0	6.50	259.90	7,859.0	-193.0	-1,124.0	1,140.5	0.13	-0.11	
8,039.0	7.00	261.20	7,950.4	-194.8	-1,134.7	1,151.3	0.57	0.54	
8,131.0	5.90	256.50	8,041.8	-196.8	-1,144.8	1,161.6	1.33	-1.20	
8,222.0	4.90	254.00	8,132.4	-198.9	-1,153.1	1,170.1	1.13	-1.10	
8,314.0	4.20	258.00	8,224.1	-200.7	-1,160.2	1,177.4	0.83	-0.76	
8,406.0	2.00	277.70	8,315.9	-201.2	-1,165.1	1,182.3	2.62	-2.39	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8505D-25 F25 496
Project:	Story Gulch	TVD Reference:	KBE @ 8320.0ft (Patterson 306)
Site:	F25 496	MD Reference:	KBE @ 8320.0ft (Patterson 306)
Well:	8505D-25 F25 496	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	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
8,498.0	0.60	295.90	8,407.9	-200.8	-1,167.1	1,184.2	1.57	-1.52	
8,590.0	0.90	267.70	8,499.9	-200.6	-1,168.3	1,185.3	0.51	0.33	
8,681.0	0.80	231.10	8,590.9	-201.0	-1,169.5	1,186.6	0.60	-0.11	
8,773.0	1.10	227.70	8,682.9	-202.0	-1,170.6	1,187.9	0.33	0.33	
8,865.0	0.40	174.40	8,774.9	-202.9	-1,171.2	1,188.7	1.00	-0.76	
8,957.0	0.90	190.30	8,866.9	-204.0	-1,171.3	1,189.0	0.57	0.54	
9,048.0	0.90	140.00	8,957.9	-205.2	-1,171.0	1,188.8	0.84	0.00	
9,140.0	0.70	140.10	9,049.8	-206.2	-1,170.2	1,188.2	0.22	-0.22	
9,232.0	1.10	145.60	9,141.8	-207.4	-1,169.3	1,187.6	0.44	0.43	
9,599.0	1.40	203.00	9,508.8	-214.4	-1,169.1	1,188.6	0.33	0.08	
9,691.0	1.00	283.60	9,600.7	-215.2	-1,170.3	1,189.9	1.72	-0.43	
9,782.0	0.50	55.80	9,691.7	-214.8	-1,170.8	1,190.3	1.52	-0.55	
9,874.0	0.20	270.40	9,783.7	-214.6	-1,170.6	1,190.1	0.73	-0.33	
9,966.0	2.40	43.00	9,875.7	-213.2	-1,169.4	1,188.7	2.76	2.39	
10,057.0	1.00	49.10	9,966.7	-211.3	-1,167.5	1,186.5	1.55	-1.54	
10,149.0	0.70	46.00	10,058.7	-210.4	-1,166.5	1,185.3	0.33	-0.33	
10,241.0	0.80	50.70	10,150.7	-209.6	-1,165.6	1,184.3	0.13	0.11	
10,332.0	0.40	74.70	10,241.7	-209.1	-1,164.8	1,183.4	0.51	-0.44	
10,424.0	0.00	100.60	10,333.7	-209.0	-1,164.5	1,183.1	0.43	-0.43	
10,516.0	1.10	54.50	10,425.6	-208.5	-1,163.8	1,182.3	1.20	1.20	
10,608.0	0.20	87.50	10,517.6	-208.0	-1,162.9	1,181.4	1.02	-0.98	
10,699.0	0.70	213.20	10,608.6	-208.4	-1,163.1	1,181.6	0.92	0.55	
10,791.0	1.90	15.20	10,700.6	-207.4	-1,163.0	1,181.3	2.80	1.30	
10,883.0	1.10	335.30	10,792.6	-205.1	-1,162.9	1,180.9	1.38	-0.87	
10,975.0	0.70	318.50	10,884.6	-203.9	-1,163.7	1,181.4	0.52	-0.43	
11,066.0	1.20	263.70	10,975.6	-203.6	-1,165.0	1,182.6	1.08	0.55	
11,158.0	1.10	341.50	11,067.6	-202.9	-1,166.2	1,183.7	1.57	-0.11	
11,250.0	0.60	324.10	11,159.5	-201.6	-1,166.8	1,184.1	0.61	-0.54	
11,341.0	1.00	261.10	11,250.5	-201.4	-1,167.9	1,185.1	0.99	0.44	
11,433.0	1.60	267.40	11,342.5	-201.6	-1,169.9	1,187.1	0.67	0.65	
11,525.0	1.60	267.20	11,434.5	-201.7	-1,172.5	1,189.7	0.01	0.00	
11,799.0	3.30	254.40	11,708.2	-204.0	-1,183.9	1,201.3	0.65	0.62	
11,890.0	3.20	245.50	11,799.1	-205.7	-1,188.7	1,206.4	0.56	-0.11	
12,073.0	2.70	232.60	11,981.8	-210.5	-1,196.8	1,215.2	0.45	-0.27	
12,180.0	3.30	231.30	12,088.7	-213.9	-1,201.2	1,220.1	0.56	0.56	Last Cathedral Survey @ 12,180' MD
12,230.0	3.30	231.30	12,138.6	-215.7	-1,203.5	1,222.7	0.00	0.00	Projection to Bit @ 12,230'

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well 8505D-25 F25 496
Project: Story Gulch	TVD Reference: KBE @ 8320.0ft (Patterson 306)
Site: F25 496	MD Reference: KBE @ 8320.0ft (Patterson 306)
Well: 8505D-25 F25 496	North Reference: True
Wellbore: DD	Survey Calculation Method: Minimum Curvature
Design: DD	Database: 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									
8505D-25 F25 496 BHL	0.00	0.00	12,045.0	-212.0	-1,181.6	1,680,906.33	2,261,449.61	39° 40' 24.94 N	108° 7' 26.81 W
- survey misses target center by 17.8ft at 12135.5ft MD (12044.3 TVD, -212.4 N, -1199.3 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
8505D-25 F25 496 TGT	0.00	0.00	8,385.0	-212.0	-1,181.6	1,680,906.33	2,261,449.61	39° 40' 24.94 N	108° 7' 26.81 W
- survey misses target center by 18.5ft at 8475.4ft MD (8385.3 TVD, -200.9 N, -1166.8 E)									
- Point									

Survey Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
		(ft)	(ft)		
12,180.0	12,088.7	-213.9	-1,201.2	Last Cathedral Survey @ 12,180' MD	
12,230.0	12,138.6	-215.7	-1,203.5	Projection to Bit @ 12,230'	

Checked By: _____	Approved By: _____	Date: _____
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