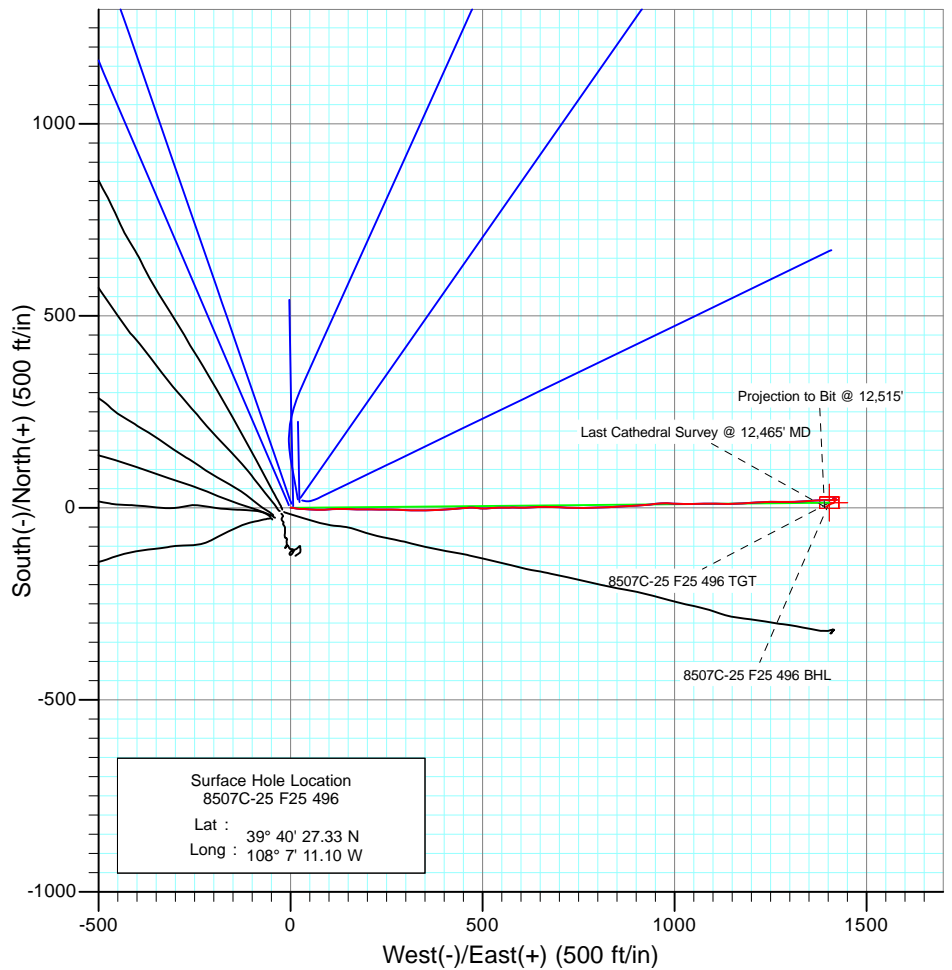
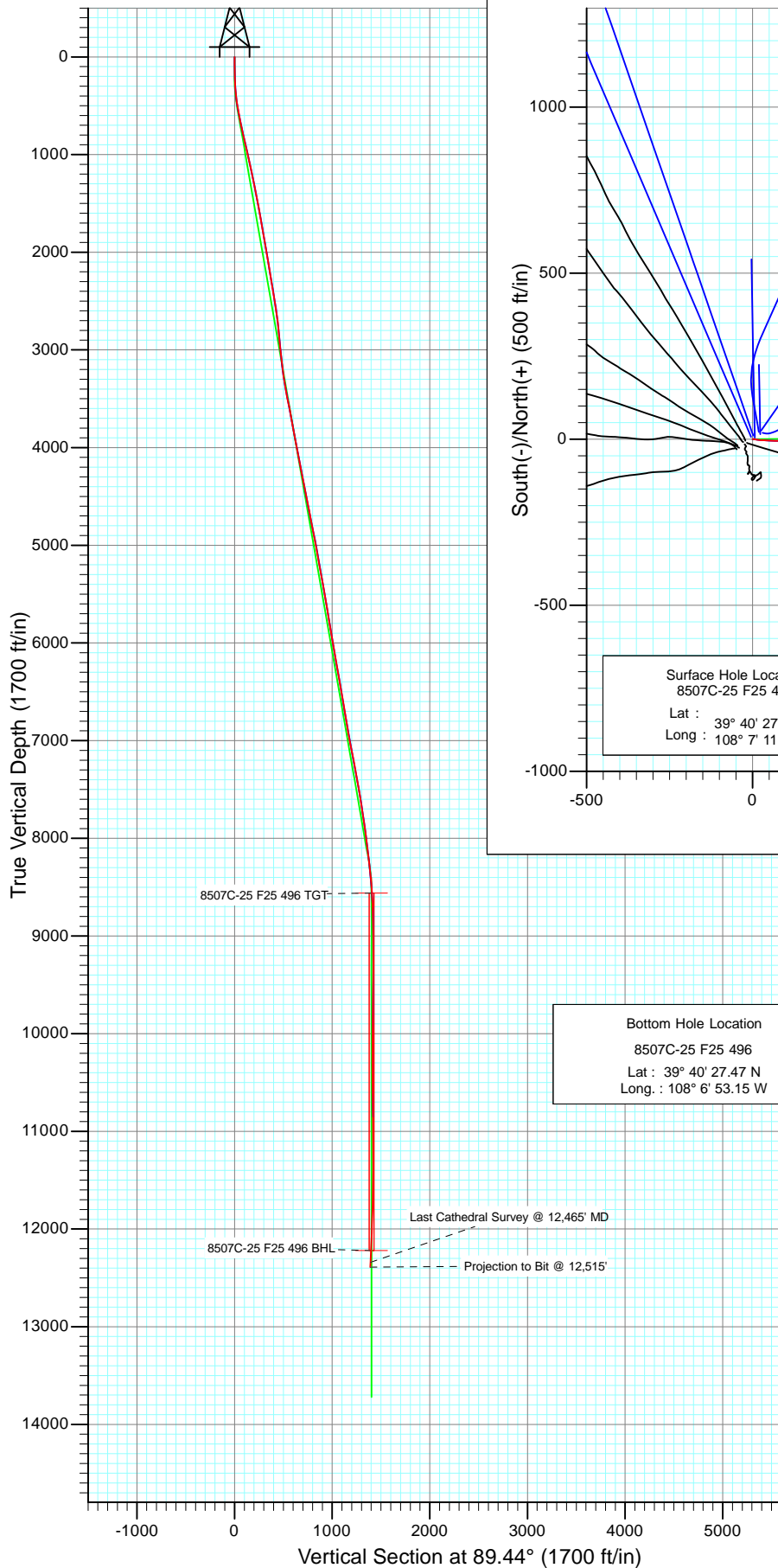




Project: Story Gulch
 Site: F25 496
 Well: 8507C-25 F25 496
 Wellbore: DD
 Design: FINAL



Bottom Hole Location
 8507C-25 F25 496
 Lat : 39° 40' 27.47 N
 Long : 108° 6' 53.15 W



Azimuths to True North
 Magnetic North: 10.52°

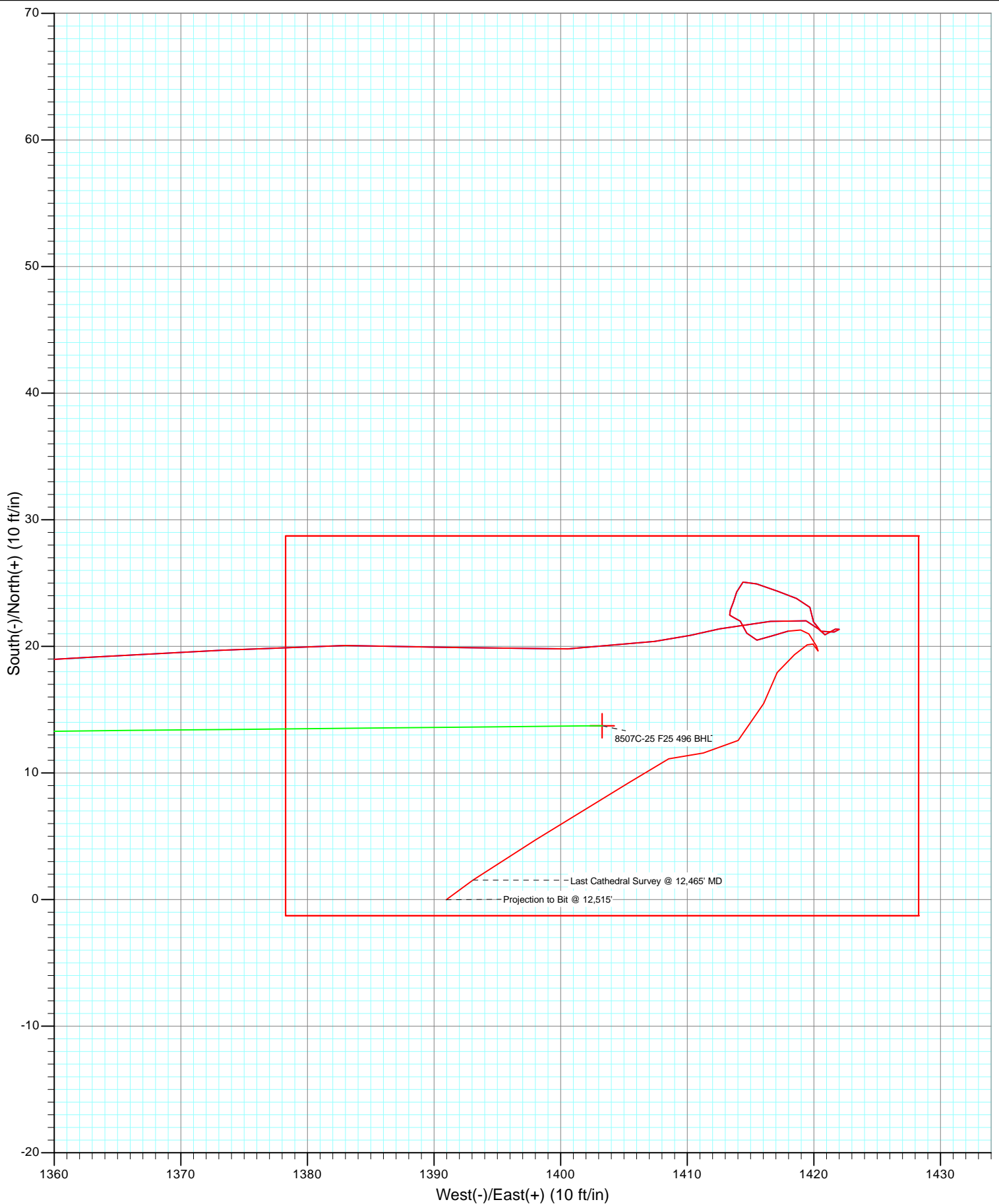
Magnetic Field
 Strength: 52385.4snT
 Dip Angle: 65.88°
 Date: 9/23/2010
 Model: IGRF2010

DESIGN DETAILS: DD
 Job #105176, 105407: KR
 KBE @ 8320.0ft (Patterson 306)

Target	Azimuth	Origin	N/S	E/W	From TVD
8507C-25 F25 496 BHL	89.44	Slot	0.0	0.0	0.0



Project: Story Gulch
Site: F25 496
Well: 8507C-25 F25 496
Wellbore: DD
Design: FINAL



Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8507C-25 F25 496
Project:	Story Gulch	TVD Reference:	KBE @ 8320.0ft (Patterson 306)
Site:	F25 496	MD Reference:	KBE @ 8320.0ft (Patterson 306)
Well:	8507C-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	8507C-25 F25 496					
Well Position	+N/-S	0.0 ft	Northing:	1,681,113.08 ft	Latitude:	39° 40' 27.33 N
	+E/-W	0.0 ft	Easting:	2,262,684.71 ft	Longitude:	108° 7' 11.10 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)
	IGRF2010	9/23/2010	10.52	65.88	52,385

Design	DD				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	89.44	

Survey Program	Date	10/8/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
221.0	10,977.0	Survey #1 (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	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
221.0	2.10	78.20	221.0	0.8	4.0	4.0	0.95	0.95		
251.0	2.10	100.60	250.9	0.8	5.0	5.1	2.72	0.00		
282.0	3.00	110.40	281.9	0.5	6.4	6.4	3.22	2.90		
312.0	3.10	106.60	311.9	-0.1	7.9	7.9	0.75	0.33		
343.0	3.90	103.70	342.8	-0.5	9.7	9.7	2.64	2.58		
374.0	4.90	99.00	373.7	-1.0	12.0	12.0	3.43	3.23		
404.0	6.00	95.90	403.6	-1.4	14.9	14.8	3.79	3.67		
435.0	7.40	98.30	434.4	-1.8	18.4	18.4	4.60	4.52		
526.0	10.50	92.10	524.2	-3.0	32.5	32.5	3.56	3.41		
618.0	11.40	93.40	614.6	-3.8	50.0	49.9	1.01	0.98		
709.0	12.10	92.80	703.7	-4.8	68.5	68.4	0.78	0.77		
804.0	12.50	85.90	796.5	-4.6	88.7	88.6	1.60	0.42		

Cathedral Energy

Survey Report

Company: EnCana Oil & Gas (USA) Inc
Project: Story Gulch
Site: F25 496
Well: 8507C-25 F25 496
Wellbore: DD
Design: DD

Local Co-ordinate Reference: Well 8507C-25 F25 496
TVD Reference: KBE @ 8320.0ft (Patterson 306)
MD Reference: KBE @ 8320.0ft (Patterson 306)
North Reference: True
Survey Calculation Method: Minimum Curvature
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
899.0	12.80	87.80	889.2	-3.4	109.5	109.4	0.54	0.32	
995.0	13.00	89.30	982.8	-2.9	130.9	130.9	0.41	0.21	
1,090.0	12.70	92.50	1,075.4	-3.2	152.0	152.0	0.81	-0.32	
1,185.0	12.40	91.20	1,168.1	-3.9	172.6	172.6	0.43	-0.32	
1,280.0	11.60	88.50	1,261.0	-3.8	192.4	192.3	1.03	-0.84	
1,375.0	11.50	91.90	1,354.1	-3.9	211.4	211.3	0.72	-0.11	
1,470.0	10.90	89.40	1,447.3	-4.1	229.8	229.8	0.81	-0.63	
1,565.0	10.10	90.70	1,540.7	-4.1	247.2	247.1	0.88	-0.84	
1,660.0	9.90	91.00	1,634.3	-4.4	263.6	263.6	0.22	-0.21	
1,755.0	9.90	92.40	1,727.9	-4.9	280.0	279.9	0.25	0.00	
1,850.0	9.70	94.20	1,821.5	-5.8	296.1	296.0	0.39	-0.21	
1,945.0	10.20	91.70	1,915.0	-6.6	312.5	312.4	0.70	0.53	
2,040.0	10.00	88.00	2,008.6	-6.6	329.2	329.1	0.71	-0.21	
2,135.0	9.20	87.80	2,102.2	-6.0	345.0	344.9	0.84	-0.84	
2,230.0	9.50	88.50	2,196.0	-5.5	360.4	360.3	0.34	0.32	
2,325.0	10.40	89.50	2,289.5	-5.2	376.8	376.8	0.96	0.95	
2,420.0	8.90	88.20	2,383.2	-4.9	392.7	392.7	1.60	-1.58	
2,515.0	8.30	86.90	2,477.1	-4.3	406.9	406.9	0.66	-0.63	
2,610.0	9.30	85.60	2,571.0	-3.4	421.4	421.4	1.07	1.05	
2,705.0	8.30	84.60	2,664.9	-2.1	435.9	435.9	1.06	-1.05	
2,800.0	6.50	84.40	2,759.1	-1.0	448.1	448.1	1.89	-1.89	
2,895.0	5.50	84.80	2,853.6	0.0	458.0	458.0	1.05	-1.05	
2,970.0	5.10	84.60	2,928.2	0.6	464.9	464.9	0.53	-0.53	
3,090.0	4.70	92.80	3,047.8	0.9	475.1	475.1	0.67	-0.33	
3,182.0	6.60	99.40	3,139.4	-0.2	484.1	484.1	2.18	2.07	
3,274.0	8.10	92.20	3,230.6	-1.3	495.8	495.7	1.91	1.63	
3,366.0	9.20	88.00	3,321.6	-1.3	509.6	509.6	1.38	1.20	
3,457.0	10.40	85.50	3,411.2	-0.4	525.1	525.0	1.40	1.32	
3,549.0	11.50	88.40	3,501.6	0.5	542.5	542.5	1.34	1.20	
3,641.0	11.20	90.00	3,591.8	0.8	560.6	560.6	0.47	-0.33	
3,733.0	10.10	88.50	3,682.2	1.0	577.6	577.6	1.23	-1.20	
3,824.0	10.90	92.10	3,771.6	0.9	594.2	594.2	1.14	0.88	
3,916.0	10.60	87.70	3,862.0	0.9	611.3	611.3	0.95	-0.33	
4,100.0	10.50	87.30	4,042.9	2.4	645.0	645.0	0.07	-0.05	
4,191.0	11.70	90.90	4,132.2	2.6	662.5	662.5	1.52	1.32	
4,283.0	11.50	91.90	4,222.3	2.2	681.0	681.0	0.31	-0.22	
4,375.0	11.10	91.90	4,312.6	1.6	699.0	699.0	0.43	-0.43	
4,466.0	10.40	93.40	4,402.0	0.8	716.0	715.9	0.83	-0.77	
4,558.0	11.10	91.70	4,492.3	0.0	733.1	733.1	0.84	0.76	
4,650.0	10.90	89.50	4,582.7	-0.1	750.7	750.6	0.51	-0.22	
4,742.0	11.70	89.20	4,672.9	0.1	768.7	768.6	0.87	0.87	
4,833.0	10.80	87.50	4,762.1	0.6	786.4	786.4	1.05	-0.99	
4,925.0	11.60	88.90	4,852.4	1.1	804.3	804.3	0.92	0.87	
5,017.0	11.00	87.60	4,942.6	1.7	822.3	822.3	0.71	-0.65	
5,109.0	10.50	87.40	5,033.0	2.4	839.4	839.4	0.54	-0.54	
5,200.0	9.70	85.10	5,122.6	3.4	855.4	855.4	0.98	-0.88	
5,292.0	10.30	88.00	5,213.2	4.4	871.3	871.3	0.85	0.65	
5,384.0	10.20	86.10	5,303.7	5.2	887.7	887.7	0.38	-0.11	
5,476.0	10.20	86.40	5,394.2	6.3	903.9	903.9	0.06	0.00	
5,567.0	9.50	85.30	5,483.9	7.4	919.4	919.5	0.80	-0.77	
5,659.0	10.10	84.40	5,574.6	8.8	935.0	935.1	0.67	0.65	
5,751.0	9.20	82.70	5,665.3	10.6	950.4	950.4	1.03	-0.98	
5,842.0	9.80	87.10	5,755.0	11.9	965.3	965.4	1.03	0.66	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8507C-25 F25 496
Project:	Story Gulch	TVD Reference:	KBE @ 8320.0ft (Patterson 306)
Site:	F25 496	MD Reference:	KBE @ 8320.0ft (Patterson 306)
Well:	8507C-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
5,934.0	9.70	91.80	5,845.7	12.0	980.9	980.9	0.87	-0.11	
6,026.0	10.20	92.30	5,936.3	11.5	996.8	996.8	0.55	0.54	
6,118.0	9.10	92.30	6,027.0	10.8	1,012.2	1,012.2	1.20	-1.20	
6,209.0	9.70	92.60	6,116.8	10.2	1,027.0	1,027.1	0.66	0.66	
6,301.0	10.40	88.30	6,207.4	10.1	1,043.1	1,043.1	1.11	0.76	
6,393.0	10.90	87.90	6,297.8	10.7	1,060.1	1,060.1	0.55	0.54	
6,485.0	10.00	88.40	6,388.2	11.2	1,076.7	1,076.8	0.98	-0.98	
6,577.0	9.30	90.80	6,478.9	11.3	1,092.2	1,092.2	0.88	-0.76	
6,669.0	9.60	91.10	6,569.7	11.1	1,107.3	1,107.3	0.33	0.33	
6,760.0	8.50	90.20	6,659.6	10.9	1,121.6	1,121.6	1.22	-1.21	
6,852.0	9.40	90.50	6,750.4	10.8	1,135.9	1,135.9	0.98	0.98	
6,944.0	9.00	89.60	6,841.3	10.8	1,150.6	1,150.6	0.46	-0.43	
7,036.0	10.50	86.60	6,931.9	11.3	1,166.2	1,166.2	1.72	1.63	
7,128.0	11.90	87.00	7,022.2	12.3	1,184.0	1,184.1	1.52	1.52	
7,219.0	11.40	85.10	7,111.3	13.6	1,202.3	1,202.4	0.69	-0.55	
7,311.0	10.70	87.90	7,201.6	14.7	1,219.9	1,220.0	0.96	-0.76	
7,403.0	10.40	88.40	7,292.0	15.2	1,236.8	1,236.8	0.34	-0.33	
7,495.0	10.20	88.90	7,382.6	15.6	1,253.2	1,253.3	0.24	-0.22	
7,586.0	9.90	88.70	7,472.2	15.9	1,269.1	1,269.2	0.33	-0.33	
7,678.0	9.20	91.20	7,562.9	16.0	1,284.3	1,284.4	0.88	-0.76	
7,770.0	8.80	90.20	7,653.7	15.8	1,298.7	1,298.8	0.47	-0.43	
7,861.0	8.50	90.20	7,743.7	15.7	1,312.4	1,312.5	0.33	-0.33	
7,953.0	8.40	84.50	7,834.7	16.4	1,325.9	1,326.0	0.92	-0.11	
8,045.0	7.90	84.80	7,925.8	17.6	1,338.9	1,339.0	0.55	-0.54	
8,137.0	7.50	86.80	8,017.0	18.5	1,351.2	1,351.3	0.52	-0.43	
8,228.0	6.90	86.80	8,107.2	19.1	1,362.6	1,362.7	0.66	-0.66	
8,320.0	6.40	87.10	8,198.6	19.7	1,373.2	1,373.3	0.54	-0.54	
8,412.0	5.80	88.70	8,290.1	20.1	1,383.0	1,383.1	0.68	-0.65	
8,503.0	5.80	93.20	8,380.6	19.9	1,392.2	1,392.3	0.50	0.00	
8,595.0	4.70	87.70	8,472.2	19.8	1,400.6	1,400.7	1.31	-1.20	
8,687.0	3.90	81.80	8,564.0	20.4	1,407.4	1,407.6	0.99	-0.87	
8,778.0	2.70	75.30	8,654.8	21.4	1,412.6	1,412.7	1.38	-1.32	
8,870.0	2.40	88.90	8,746.7	22.0	1,416.6	1,416.7	0.73	-0.33	
8,962.0	1.10	89.80	8,838.7	22.0	1,419.4	1,419.5	1.41	-1.41	
9,054.0	0.80	172.80	8,930.7	21.4	1,420.4	1,420.5	1.39	-0.33	
9,145.0	0.60	69.30	9,021.7	20.9	1,420.9	1,421.0	1.22	-0.22	
9,236.0	0.60	53.60	9,112.7	21.4	1,421.7	1,421.9	0.18	0.00	
9,328.0	0.40	197.90	9,204.7	21.3	1,422.0	1,422.1	1.04	-0.22	
9,419.0	0.40	287.20	9,295.7	21.1	1,421.6	1,421.7	0.62	0.00	
9,511.0	0.90	266.60	9,387.7	21.2	1,420.6	1,420.7	0.59	0.54	
9,603.0	1.00	8.90	9,479.7	21.9	1,420.0	1,420.1	1.61	0.11	
9,693.0	0.70	312.40	9,569.7	23.1	1,419.7	1,419.9	0.94	-0.33	
9,785.0	0.90	295.90	9,661.6	23.8	1,418.6	1,418.8	0.33	0.22	
9,876.0	1.10	287.10	9,752.6	24.4	1,417.2	1,417.3	0.28	0.22	
9,968.0	1.10	291.60	9,844.6	24.9	1,415.5	1,415.7	0.09	0.00	
10,060.0	0.40	235.20	9,936.6	25.1	1,414.4	1,414.6	1.02	-0.76	
10,152.0	0.80	201.20	10,028.6	24.3	1,413.9	1,414.1	0.56	0.43	
10,243.0	0.30	187.40	10,119.6	23.5	1,413.6	1,413.8	0.56	-0.55	
10,335.0	0.50	210.00	10,211.6	22.9	1,413.4	1,413.6	0.27	0.22	
10,427.0	0.20	116.80	10,303.6	22.5	1,413.4	1,413.5	0.60	-0.33	
10,519.0	0.20	121.60	10,395.6	22.3	1,413.6	1,413.8	0.02	0.00	
10,610.0	0.60	118.70	10,486.6	22.0	1,414.2	1,414.3	0.44	0.44	
10,702.0	0.90	172.40	10,578.6	21.0	1,414.7	1,414.8	0.79	0.33	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8507C-25 F25 496
Project:	Story Gulch	TVD Reference:	KBE @ 8320.0ft (Patterson 306)
Site:	F25 496	MD Reference:	KBE @ 8320.0ft (Patterson 306)
Well:	8507C-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
10,794.0	0.90	76.50	10,670.6	20.5	1,415.5	1,415.6	1.45	0.00	
10,885.0	0.70	71.60	10,761.6	20.8	1,416.7	1,416.9	0.23	-0.22	
10,977.0	0.90	75.20	10,853.6	21.2	1,418.0	1,418.1	0.22	0.22	
11,069.0	0.40	105.60	10,945.6	21.3	1,419.0	1,419.1	0.64	-0.54	
11,161.0	0.50	124.40	11,037.6	21.0	1,419.6	1,419.7	0.19	0.11	
11,252.0	1.00	159.60	11,128.5	20.0	1,420.2	1,420.3	0.72	0.55	
11,344.0	0.50	338.20	11,220.5	19.6	1,420.3	1,420.5	1.63	-0.54	
11,435.0	0.40	304.60	11,311.5	20.2	1,419.9	1,420.1	0.30	-0.11	
11,527.0	0.40	218.80	11,403.5	20.1	1,419.5	1,419.6	0.59	0.00	
11,618.0	1.20	236.40	11,494.5	19.3	1,418.5	1,418.6	0.91	0.88	
11,710.0	1.30	213.20	11,586.5	17.9	1,417.1	1,417.2	0.56	0.11	
11,801.0	2.10	197.10	11,677.5	15.5	1,416.0	1,416.1	1.02	0.88	
11,893.0	2.50	229.60	11,769.4	12.6	1,414.0	1,414.1	1.46	0.43	
11,984.0	1.60	283.20	11,860.3	11.6	1,411.3	1,411.3	2.21	-0.99	
12,075.0	2.10	243.30	11,951.3	11.1	1,408.5	1,408.6	1.48	0.55	
12,167.0	2.50	235.60	12,043.2	9.2	1,405.4	1,405.4	0.55	0.43	
12,350.0	2.90	241.00	12,226.0	4.7	1,398.0	1,398.0	0.26	0.22	
12,465.0	3.00	233.70	12,340.9	1.5	1,393.1	1,393.0	0.34	0.09	Last Cathedral Survey @ 12,465' MD Projection to Bit @ 12,515'
12,515.0	3.00	233.70	12,390.8	0.0	1,391.0	1,390.9	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
8507C-25 F25 496 BHL - hit/miss target - Shape	0.00	0.00	12,220.0	13.7	1,403.3	1,681,086.34	2,264,087.80	39° 40' 27.47 N	108° 6' 53.15 W
- survey misses target center by 10.1ft at 12343.6ft MD (12219.6 TVD, 4.9 N, 1398.3 E) - Rectangle (sides W30.0 H50.0 D0.0)									
8507C-25 F25 496 TGT - survey misses target center by 7.7ft at 8682.7ft MD (8559.7 TVD, 20.4 N, 1407.1 E) - Point	0.00	0.00	8,560.0	13.7	1,403.3	1,681,086.34	2,264,087.80	39° 40' 27.47 N	108° 6' 53.15 W

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
12,465.0	12,340.9	1.5	1,393.1	Last Cathedral Survey @ 12,465' MD	
12,515.0	12,390.8	0.0	1,391.0	Projection to Bit @ 12,515'	

Checked By: _____ Approved By: _____ Date: _____