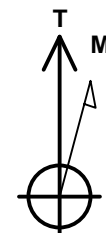
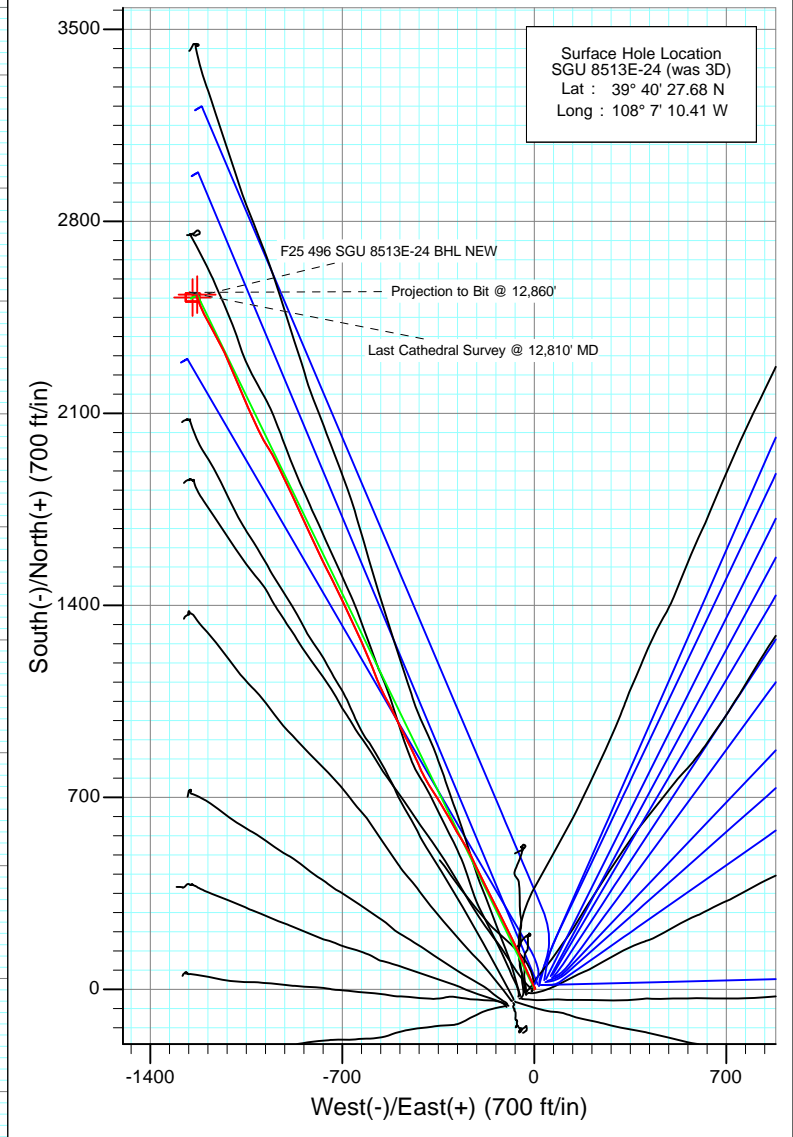
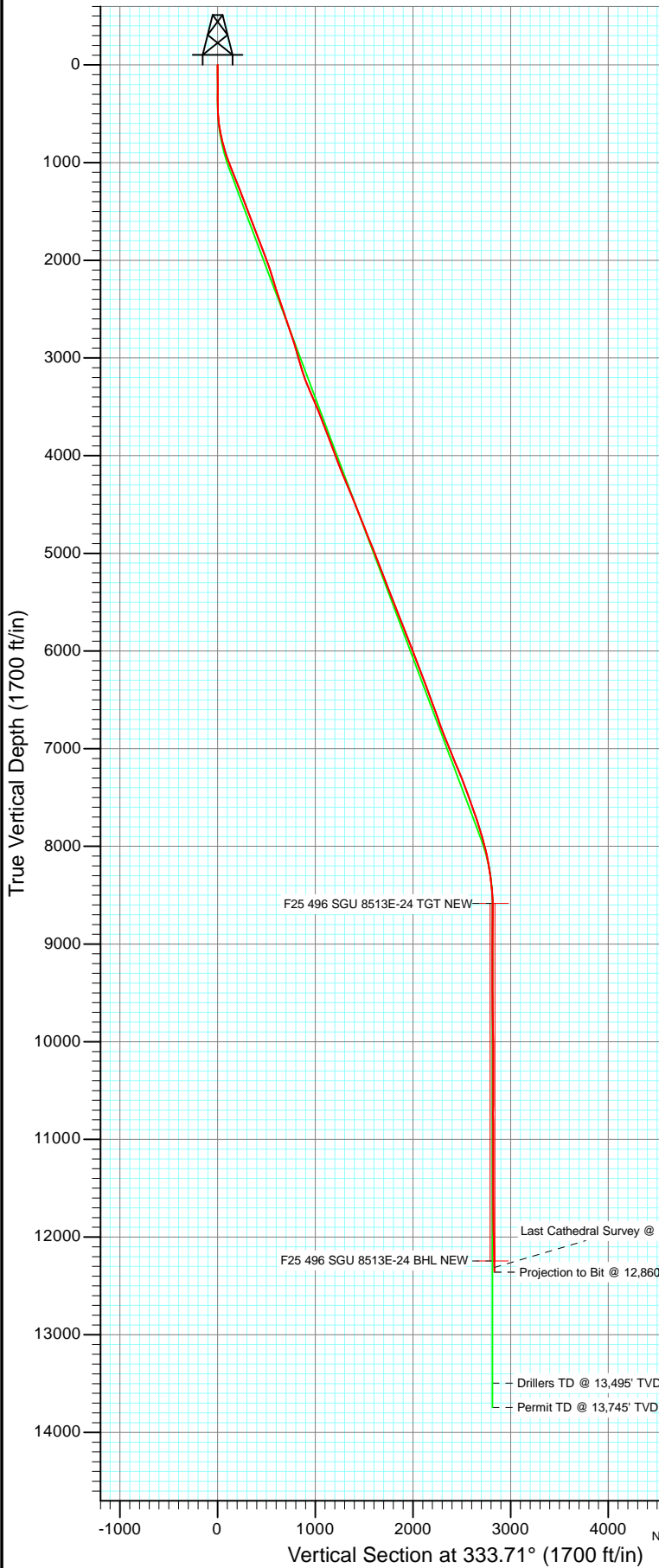




Project: Story Gulch
 Site: F25 496
 Well: SGU 8513E-24 (was 3D)
 Wellbore: DD
 Design: FINAL



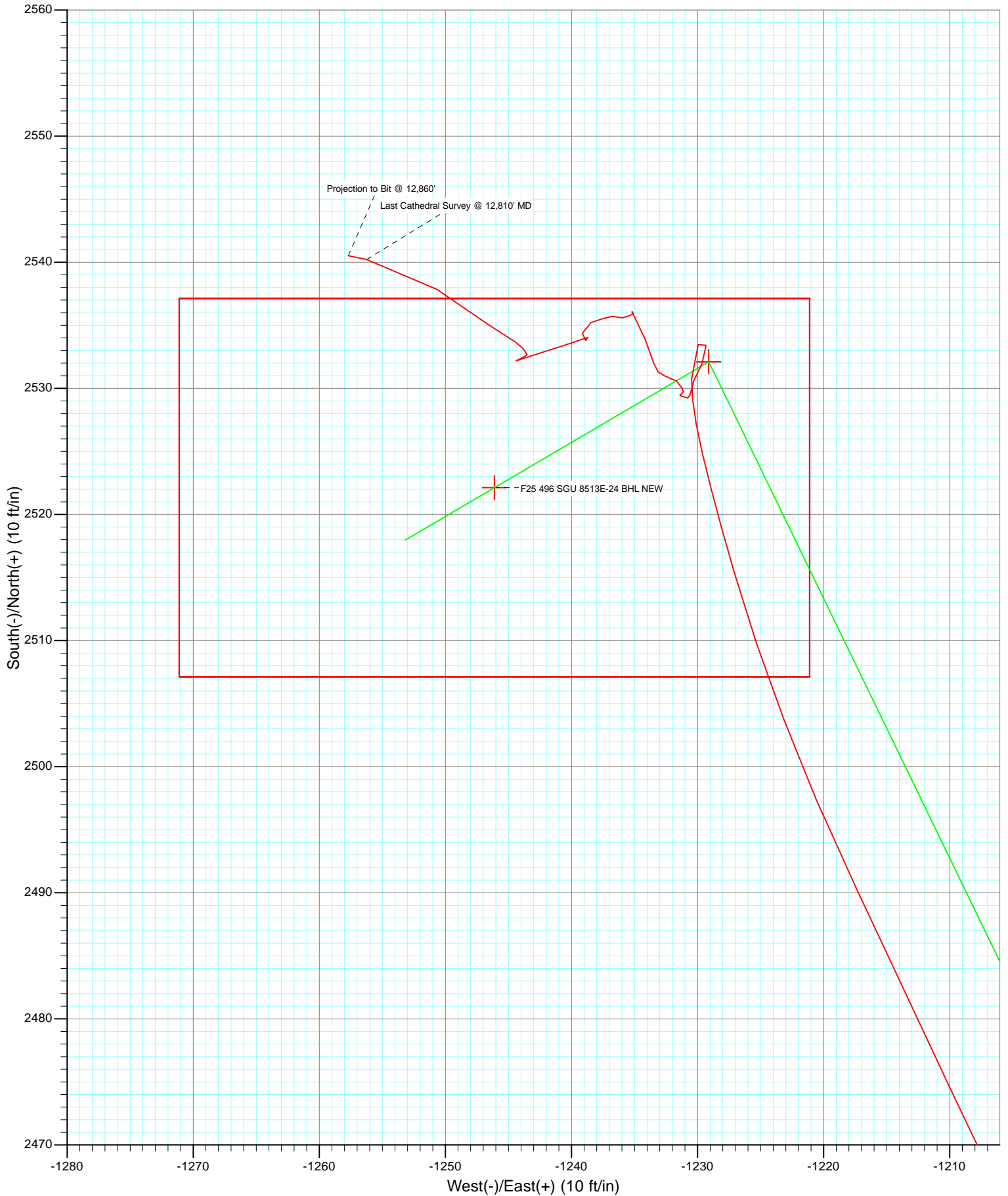
Azimuths to True North
 Magnetic North: 10.46°

Magnetic Field
 Strength: 52339.6snT
 Dip Angle: 65.87°
 Date: 3/8/2011
 Model: IGRF2010

DD SGU 8513E-24 (was 3D)						
KBE @ 8320.0ft (Patterson 306) North American Datum 1983 Well SGU 8513E-24 (was 3D), True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W from TVD
User	No Target (Freehand)	333.71	Slot		0.0	0.0 0.0
		+N/-S	+E/-W	Latitude		Longitude
F25 496 SGU 8513E-24 TGT NEW		8585.0	2532.1	-1229.1	39° 40' 52.70 N	108° 7' 26.13 W
F25 496 SGU 8513E-24 BHL NEW		12245.0	2522.1	-1246.1	39° 40' 52.60 N	108° 7' 26.35 W



Project: Story Gulch
Site: F25 496
Well: SGU 8513E-24 (was 3D)
Wellbore: DD
Design: FINAL



Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well SGU 8513E-24 (was 3D)
Project: Story Gulch	TVD Reference: KBE @ 8320.0ft (Patterson 306)
Site: F25 496	MD Reference: KBE @ 8320.0ft (Patterson 306)
Well: SGU 8513E-24 (was 3D)	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 SGU 8513E-24 (was 3D)					
Well Position	+N/-S 0.0 ft	Northing: 1,681,146.06 ft	Latitude: 39° 40' 27.68 N		
	+E/-W 0.0 ft	Easting: 2,262,739.53 ft	Longitude: 108° 7' 10.41 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	3/8/2011	10.46	65.87	52,340

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	333.71	

Survey Program Date 3/18/2011					
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
192.0	12,860.0	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	
192.0	1.10	50.00	192.0	1.2	1.4	0.4	0.57	0.57	
223.0	1.20	50.00	223.0	1.6	1.9	0.6	0.32	0.32	
253.0	0.90	51.20	253.0	1.9	2.3	0.7	1.00	-1.00	
284.0	0.50	55.40	284.0	2.2	2.6	0.8	1.30	-1.29	
315.0	0.30	69.60	315.0	2.3	2.8	0.8	0.72	-0.65	
346.0	0.20	86.30	346.0	2.3	2.9	0.8	0.40	-0.32	
376.0	0.00	100.50	376.0	2.3	3.0	0.7	0.67	-0.67	
407.0	0.70	318.60	407.0	2.4	2.9	0.9	2.26	2.26	
438.0	1.30	321.60	438.0	2.9	2.5	1.5	1.94	1.94	
468.0	2.40	23.50	468.0	3.7	2.6	2.2	7.08	3.67	
499.0	3.70	321.70	498.9	5.1	2.2	3.6	10.72	4.19	
530.0	4.60	328.60	529.8	6.9	0.9	5.8	3.32	2.90	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8513E-24 (was 3D)
Project:	Story Gulch	TD Reference:	KBE @ 8320.0ft (Patterson 306)
Site:	F25 496	MVD Reference:	KBE @ 8320.0ft (Patterson 306)
Well:	SGU 8513E-24 (was 3D)	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
561.0	5.90	332.50	560.7	9.4	-0.5	8.6	4.35	4.19	
592.0	7.10	332.60	591.5	12.5	-2.1	12.1	3.87	3.87	
623.0	8.60	334.00	622.2	16.3	-4.0	16.4	4.88	4.84	
720.0	12.20	335.70	717.6	32.2	-11.4	33.9	3.72	3.71	
815.0	14.50	334.60	810.0	52.1	-20.6	55.8	2.44	2.42	
911.0	17.40	336.10	902.3	76.1	-31.6	82.2	3.05	3.02	
1,006.0	21.00	336.30	992.0	104.6	-44.2	113.4	3.79	3.79	
1,101.0	21.80	334.50	1,080.5	136.1	-58.6	148.0	1.09	0.84	
1,196.0	21.80	334.10	1,168.7	167.9	-73.9	183.3	0.16	0.00	
1,292.0	21.70	334.20	1,257.8	199.9	-89.4	218.9	0.11	-0.10	
1,386.0	21.40	335.10	1,345.3	231.1	-104.2	253.4	0.47	-0.32	
1,480.0	20.70	331.40	1,433.0	261.3	-119.4	287.1	1.60	-0.74	
1,576.0	20.60	333.00	1,522.8	291.2	-135.2	321.0	0.60	-0.10	
1,671.0	21.00	333.80	1,611.7	321.4	-150.3	354.7	0.52	0.42	
1,766.0	20.30	333.00	1,700.5	351.4	-165.3	388.2	0.79	-0.74	
1,861.0	21.10	334.40	1,789.4	381.5	-180.1	421.8	0.99	0.84	
1,957.0	21.50	334.20	1,878.9	412.9	-195.3	456.7	0.42	0.42	
2,052.0	20.10	334.20	1,967.7	443.3	-210.0	490.4	1.47	-1.47	
2,147.0	19.10	334.30	2,057.2	472.0	-223.8	522.3	1.05	-1.05	
2,242.0	17.80	331.90	2,147.3	498.8	-237.4	552.3	1.58	-1.37	
2,337.0	17.10	328.30	2,237.9	523.5	-251.6	580.7	1.35	-0.74	
2,432.0	17.40	328.20	2,328.6	547.4	-266.4	608.8	0.32	0.32	
2,527.0	18.40	330.00	2,419.0	572.5	-281.4	637.9	1.20	1.05	
2,623.0	18.90	331.10	2,510.0	599.2	-296.5	668.5	0.64	0.52	
2,718.0	19.20	329.70	2,599.8	626.2	-311.8	699.5	0.58	0.32	
2,813.0	19.40	330.10	2,689.4	653.3	-327.5	730.8	0.25	0.21	
2,909.0	18.00	328.30	2,780.4	679.8	-343.3	761.5	1.58	-1.46	
2,995.0	17.30	328.00	2,862.3	701.9	-357.0	787.5	0.82	-0.81	
3,086.0	15.70	326.30	2,949.6	723.6	-371.0	813.1	1.84	-1.76	
3,177.0	15.80	329.50	3,037.2	744.6	-384.1	837.7	0.96	0.11	
3,269.0	17.70	330.30	3,125.3	767.5	-397.4	864.1	2.08	2.07	
3,361.0	20.10	335.60	3,212.3	794.1	-410.9	893.9	3.20	2.61	
3,452.0	22.60	337.20	3,297.0	824.4	-424.1	927.0	2.82	2.75	
3,544.0	23.60	334.20	3,381.7	857.3	-439.0	963.1	1.68	1.09	
3,636.0	22.30	332.50	3,466.4	889.4	-455.1	998.9	1.59	-1.41	
3,727.0	23.10	334.30	3,550.3	920.8	-470.8	1,034.0	1.16	0.88	
3,819.0	21.40	332.60	3,635.5	951.9	-486.3	1,068.9	1.98	-1.85	
3,911.0	20.30	333.90	3,721.5	981.2	-501.1	1,101.6	1.30	-1.20	
4,003.0	20.20	332.90	3,807.8	1,009.6	-515.3	1,133.5	0.39	-0.11	
4,094.0	21.20	333.90	3,892.9	1,038.4	-529.7	1,165.6	1.17	1.10	
4,186.0	20.50	332.30	3,978.9	1,067.6	-544.5	1,198.4	0.98	-0.76	
4,277.0	20.50	334.10	4,064.1	1,096.0	-558.9	1,230.2	0.69	0.00	
4,369.0	22.20	338.20	4,149.8	1,126.7	-572.4	1,263.7	2.46	1.85	
4,461.0	23.00	338.40	4,234.7	1,159.5	-585.5	1,298.9	0.87	0.87	
4,552.0	21.90	337.90	4,318.8	1,191.8	-598.4	1,333.6	1.23	-1.21	
4,644.0	22.50	338.50	4,404.0	1,224.1	-611.3	1,368.2	0.70	0.65	
4,735.0	23.00	335.10	4,487.9	1,256.4	-625.2	1,403.3	1.55	0.55	
4,827.0	21.40	334.30	4,573.1	1,287.8	-640.0	1,438.1	1.77	-1.74	
4,919.0	21.50	336.50	4,658.8	1,318.4	-654.0	1,471.7	0.88	0.11	
5,010.0	21.30	334.70	4,743.5	1,348.6	-667.7	1,504.9	0.75	-0.22	
5,102.0	21.70	335.00	4,829.1	1,379.2	-682.1	1,538.6	0.45	0.43	
5,194.0	22.60	334.60	4,914.3	1,410.5	-696.8	1,573.3	0.99	0.98	
5,285.0	20.90	334.00	4,998.8	1,440.9	-711.5	1,607.0	1.88	-1.87	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8513E-24 (was 3D)
Project:	Story Gulch	TVD Reference:	KBE @ 8320.0ft (Patterson 306)
Site:	F25 496	MVD Reference:	KBE @ 8320.0ft (Patterson 306)
Well:	SGU 8513E-24 (was 3D)	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
5,377.0	21.50	334.30	5,084.6	1,470.9	-726.0	1,640.3	0.66	0.65	
5,469.0	21.60	332.60	5,170.1	1,501.1	-741.1	1,674.1	0.69	0.11	
5,560.0	20.60	332.70	5,255.0	1,530.2	-756.1	1,706.8	1.10	-1.10	
5,652.0	21.10	333.90	5,341.0	1,559.4	-770.8	1,739.6	0.71	0.54	
5,744.0	21.30	335.90	5,426.8	1,589.6	-784.9	1,772.8	0.82	0.22	
5,835.0	21.90	335.50	5,511.4	1,620.1	-798.7	1,806.3	0.68	0.66	
5,927.0	22.20	334.60	5,596.7	1,651.4	-813.3	1,840.8	0.49	0.33	
6,018.0	20.70	334.00	5,681.4	1,681.4	-827.7	1,874.1	1.67	-1.65	
6,109.0	21.20	335.10	5,766.4	1,710.8	-841.7	1,906.6	0.70	0.55	
6,201.0	21.40	335.00	5,852.1	1,741.1	-855.8	1,940.0	0.22	0.22	
6,292.0	21.00	336.50	5,936.9	1,771.1	-869.3	1,972.9	0.74	-0.44	
6,384.0	21.00	335.20	6,022.8	1,801.2	-882.8	2,005.9	0.51	0.00	
6,475.0	21.10	334.50	6,107.7	1,830.8	-896.7	2,038.5	0.30	0.11	
6,567.0	21.10	334.00	6,193.6	1,860.6	-911.1	2,071.7	0.20	0.00	
6,658.0	20.30	333.90	6,278.7	1,889.5	-925.2	2,103.8	0.88	-0.88	
6,750.0	20.80	333.60	6,364.8	1,918.4	-939.5	2,136.1	0.56	0.54	
6,841.0	19.50	331.20	6,450.3	1,946.2	-954.0	2,167.5	1.69	-1.43	
6,932.0	21.00	328.00	6,535.6	1,973.4	-969.9	2,198.9	2.05	1.65	
7,024.0	19.60	330.50	6,621.9	2,000.8	-986.3	2,230.7	1.79	-1.52	
7,116.0	19.20	334.30	6,708.7	2,027.8	-1,000.4	2,261.2	1.44	-0.43	
7,207.0	20.90	335.10	6,794.2	2,056.1	-1,013.8	2,292.4	1.89	1.87	
7,298.0	22.10	334.40	6,878.9	2,086.2	-1,028.0	2,325.7	1.35	1.32	
7,390.0	22.20	336.30	6,964.1	2,117.7	-1,042.5	2,360.4	0.79	0.11	
7,481.0	21.20	336.00	7,048.6	2,148.5	-1,056.1	2,394.0	1.11	-1.10	
7,573.0	23.10	337.30	7,133.8	2,180.4	-1,069.8	2,428.7	2.13	2.07	
7,665.0	22.30	337.10	7,218.7	2,213.1	-1,083.6	2,464.1	0.87	-0.87	
7,756.0	21.50	337.60	7,303.1	2,244.4	-1,096.6	2,498.0	0.90	-0.88	
7,848.0	21.10	337.20	7,388.8	2,275.3	-1,109.5	2,531.3	0.46	-0.43	
7,940.0	20.40	337.20	7,474.9	2,305.3	-1,122.1	2,563.9	0.76	-0.76	
8,031.0	20.00	331.60	7,560.3	2,333.6	-1,135.6	2,595.2	2.17	-0.44	
8,123.0	19.10	331.60	7,647.0	2,360.7	-1,150.3	2,626.0	0.98	-0.98	
8,215.0	18.10	331.60	7,734.2	2,386.5	-1,164.2	2,655.3	1.09	-1.09	
8,307.0	17.40	332.10	7,821.8	2,411.2	-1,177.5	2,683.4	0.78	-0.76	
8,490.0	14.50	332.80	7,997.7	2,455.8	-1,200.8	2,733.6	1.59	-1.58	
8,582.0	11.90	335.00	8,087.3	2,474.7	-1,210.0	2,754.6	2.88	-2.83	
8,674.0	10.00	334.70	8,177.6	2,490.5	-1,217.5	2,772.1	2.07	-2.07	
8,765.0	8.30	339.30	8,267.5	2,503.8	-1,223.2	2,786.5	2.03	-1.87	
8,857.0	7.20	343.80	8,358.6	2,515.5	-1,227.1	2,798.8	1.36	-1.20	
8,949.0	4.90	346.80	8,450.1	2,524.9	-1,229.6	2,808.3	2.52	-2.50	
9,040.0	2.60	1.30	8,540.9	2,530.7	-1,230.5	2,813.9	2.71	-2.53	
9,132.0	1.00	35.50	8,632.8	2,533.5	-1,229.9	2,816.2	2.02	-1.74	
9,224.0	0.90	166.60	8,724.8	2,533.4	-1,229.3	2,815.8	1.88	-0.11	
9,316.0	1.10	213.30	8,816.8	2,532.0	-1,229.6	2,814.7	0.88	0.22	
9,408.0	0.80	195.40	8,908.8	2,530.6	-1,230.3	2,813.8	0.45	-0.33	
9,499.0	0.70	194.90	8,999.8	2,529.5	-1,230.6	2,812.9	0.11	-0.11	
9,591.0	0.40	353.90	9,091.8	2,529.2	-1,230.8	2,812.8	1.18	-0.33	
9,683.0	0.60	246.60	9,183.8	2,529.4	-1,231.3	2,813.1	0.88	0.22	
9,774.0	0.50	47.60	9,274.8	2,529.5	-1,231.4	2,813.2	1.19	-0.11	
9,866.0	0.00	141.90	9,366.8	2,529.7	-1,231.1	2,813.3	0.54	-0.54	
9,958.0	0.40	337.20	9,458.8	2,530.0	-1,231.2	2,813.6	0.43	0.43	
10,050.0	0.50	310.40	9,550.8	2,530.6	-1,231.7	2,814.3	0.25	0.11	
10,141.0	0.80	282.80	9,641.8	2,531.0	-1,232.6	2,815.1	0.47	0.33	
10,232.0	1.20	342.30	9,732.8	2,532.0	-1,233.5	2,816.4	1.16	0.44	

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well SGU 8513E-24 (was 3D)
Project: Story Gulch	TVD Reference: KBE @ 8320.0ft (Patterson 306)
Site: F25 496	MD Reference: KBE @ 8320.0ft (Patterson 306)
Well: SGU 8513E-24 (was 3D)	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
10,324.0	1.20	338.80	9,824.8	2,533.8	-1,234.1	2,818.4	0.08	0.00	
10,416.0	1.10	330.30	9,916.7	2,535.5	-1,234.9	2,820.2	0.21	-0.11	
10,507.0	0.30	140.00	10,007.7	2,536.1	-1,235.2	2,820.8	1.53	-0.88	
10,599.0	0.10	315.00	10,099.7	2,536.0	-1,235.1	2,820.7	0.43	-0.22	
10,690.0	0.40	221.30	10,190.7	2,535.8	-1,235.4	2,820.6	0.46	0.33	
10,782.0	0.50	280.50	10,282.7	2,535.6	-1,236.0	2,820.8	0.49	0.11	
10,874.0	0.50	275.50	10,374.7	2,535.7	-1,236.8	2,821.2	0.05	0.00	
10,966.0	0.50	237.30	10,466.7	2,535.5	-1,237.5	2,821.4	0.36	0.00	
11,056.0	0.80	260.20	10,556.7	2,535.2	-1,238.4	2,821.5	0.43	0.33	
11,148.0	0.90	183.10	10,648.7	2,534.4	-1,239.1	2,821.1	1.15	0.11	
11,240.0	0.40	64.60	10,740.7	2,533.8	-1,238.9	2,820.4	1.25	-0.54	
11,332.0	0.20	311.10	10,832.7	2,534.0	-1,238.7	2,820.6	0.56	-0.22	
11,423.0	0.70	236.50	10,923.7	2,533.8	-1,239.3	2,820.6	0.74	0.55	
11,515.0	1.30	259.70	11,015.7	2,533.3	-1,240.8	2,820.9	0.77	0.65	
11,607.0	1.90	247.00	11,107.7	2,532.6	-1,243.2	2,821.2	0.75	0.65	
11,699.0	0.40	46.50	11,199.6	2,532.2	-1,244.4	2,821.4	2.48	-1.63	
11,790.0	0.50	76.20	11,290.6	2,532.5	-1,243.8	2,821.4	0.27	0.11	
11,881.0	0.20	300.20	11,381.6	2,532.7	-1,243.5	2,821.5	0.72	-0.33	
12,065.0	0.20	354.80	11,565.6	2,533.2	-1,243.8	2,822.0	0.10	0.00	
12,248.0	0.40	289.50	11,748.6	2,533.7	-1,244.5	2,822.8	0.20	0.11	
12,431.0	1.20	307.00	11,931.6	2,535.1	-1,246.6	2,825.0	0.45	0.44	
12,614.0	1.90	302.90	12,114.5	2,537.9	-1,250.7	2,829.3	0.39	0.38	
12,810.0	1.70	281.80	12,310.5	2,540.2	-1,256.2	2,833.9	0.35	-0.10	Last Cathedral Survey @ 12,810' MD
12,860.0	1.70	281.80	12,360.4	2,540.5	-1,257.7	2,834.8	0.00	0.00	Projection to Bit @ 12,860'

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
F25 496 SGU 8513E-24 - hit/miss target - Shape	0.00	0.00	12,245.0	2,522.1	-1,246.1	1,683,703.06	2,261,566.66	39° 40' 52.60 N	108° 7' 26.35 W
- survey misses target center by 19.4ft at 12744.1ft MD (12244.6 TVD, 2539.7 N, -1254.3 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
F25 496 SGU 8513E-24 - survey misses target center by 1.3ft at 9084.1ft MD (8585.0 TVD, 2532.4 N, -1230.3 E)	0.00	0.00	8,585.0	2,532.1	-1,229.1	1,683,712.55	2,261,583.94	39° 40' 52.70 N	108° 7' 26.13 W
- Point									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
12,810.0	12,310.5	2,540.2	-1,256.2	Last Cathedral Survey @ 12,810' MD
12,860.0	12,360.4	2,540.5	-1,257.7	Projection to Bit @ 12,860'

Checked By: _____ Approved By: _____ Date: _____