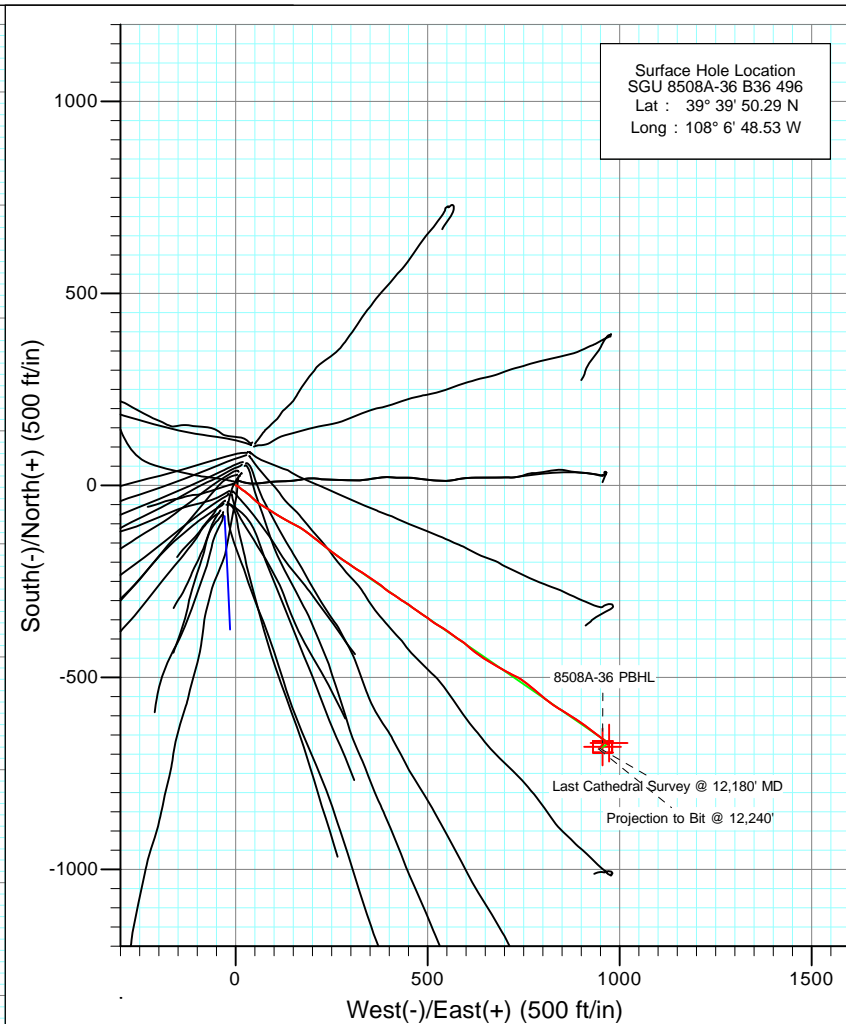
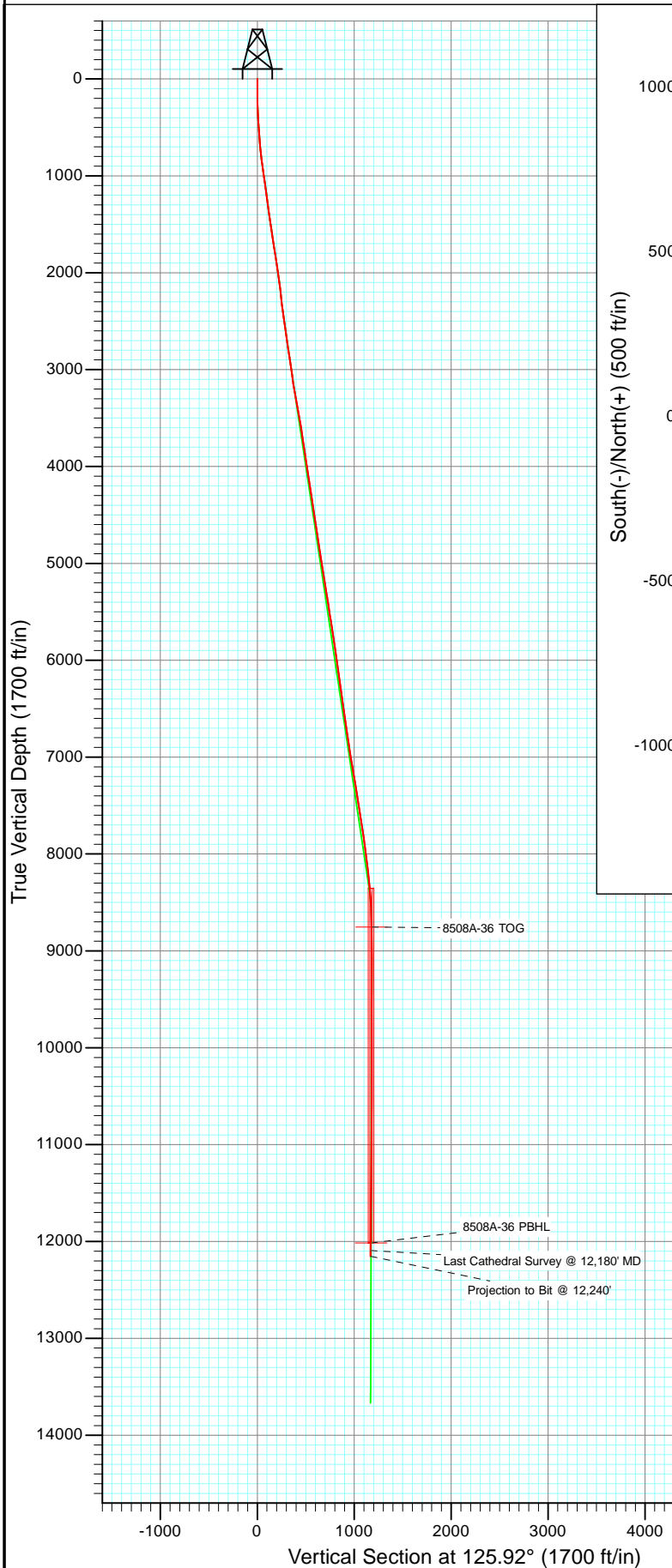




Project: Story Gulch
 Site: S36-T4S-R96W (B36 496)
 Well: SGU 8508A-36 B36 496
 Wellbore: DD
 Design: FINAL



Surface Hole Location
 SGU 8508A-36 B36 496
 Lat : 39° 39' 50.29 N
 Long : 108° 6' 48.53 W



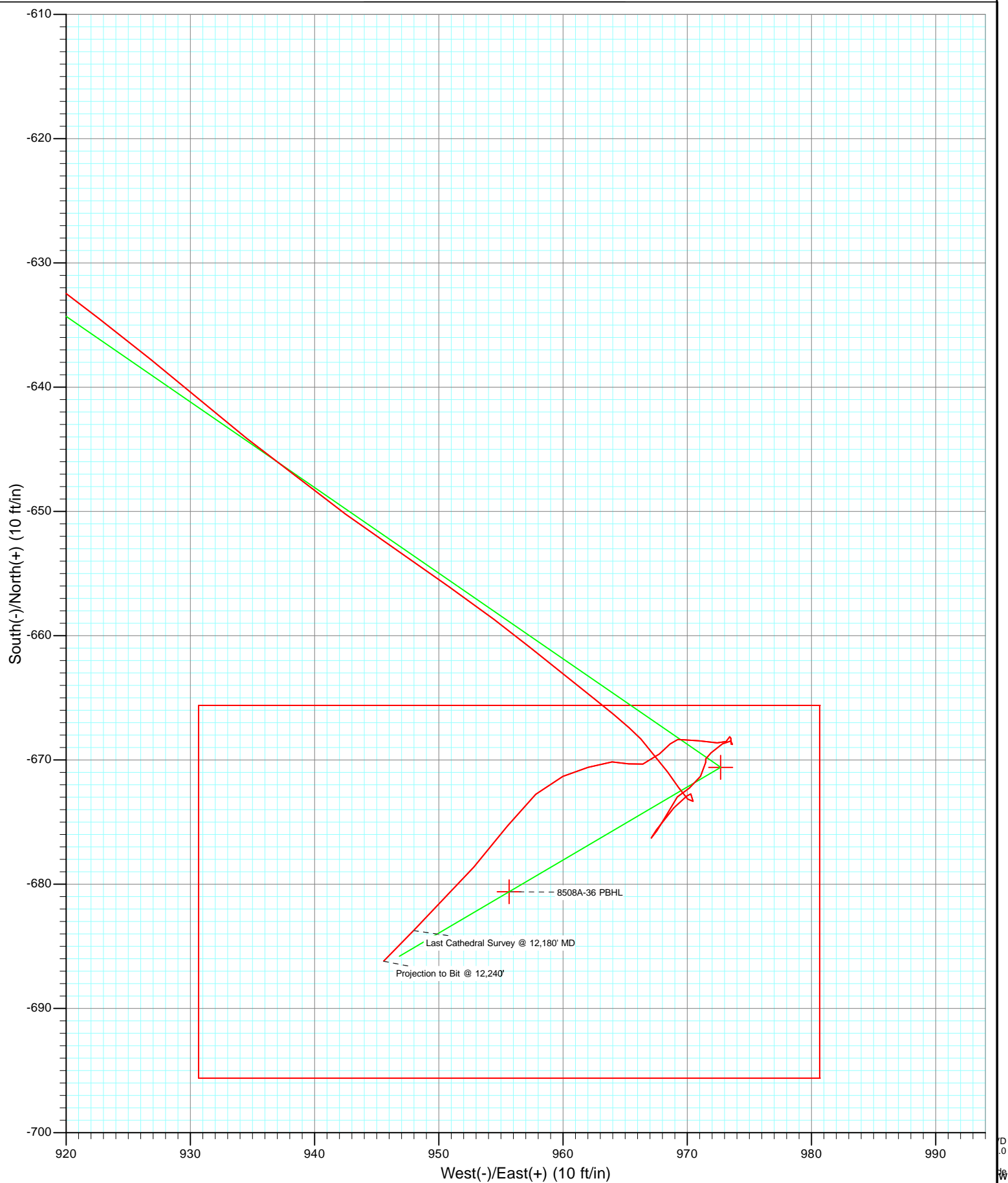
Azimuths to True North
 Magnetic North: 10.48°

Magnetic Field
 Strength: 52350.4snT
 Dip Angle: 65.87°
 Date: 1/9/2011
 Model: IGRF2010

DD						
SGU 8508A-36 B36 496						
105457 (SH), 115015 (MH); LR						
WELL @ 8374.0ft (Patterson 308)						
North American Datum 1983						
Well SGU 8508A-36 B36 496, True North						
Type	Target	Azimuth	Origin	N/S	E/W	From TVD
User	No Target (Freehand)	125.92	Type Slot	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
8508A-36 PBHL	12015.0	-680.6	955.7	39° 39' 43.56 N	108° 6' 36.31 W	



Project: Story Gulch
Site: S36-T4S-R96W (B36 496)
Well: SGU 8508A-36 B36 496
Wellbore: DD
Design: FINAL



Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8508A-36 B36 496
Project:	Story Gulch	TVD Reference:	WELL @ 8374.0ft (Patterson 308)
Site:	S36-T4S-R96W (B36 496)	MD Reference:	WELL @ 8374.0ft (Patterson 308)
Well:	SGU 8508A-36 B36 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		S36-T4S-R96W (B36 496)			
Site Position:		Northing:	1,677,422.27 ft	Latitude:	39° 39' 51.36 N
From:	Lat/Long	Easting:	2,264,394.80 ft	Longitude:	108° 6' 47.88 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.65 °

Well	SGU 8508A-36 B36 496					
Well Position	+N/-S	0.0 ft	Northing:	1,677,315.17 ft	Latitude:	39° 39' 50.29 N
	+E/-W	0.0 ft	Easting:	2,264,340.67 ft	Longitude:	108° 6' 48.53 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,352.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/9/2011	10.48	65.87	52,350

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	125.92	

Survey Program	Date	2/14/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
174.0	12,240.0	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		
174.0	0.40	58.60	174.0	0.3	0.5	0.2	0.23	0.23		
204.0	0.70	92.00	204.0	0.4	0.8	0.4	1.42	1.00		
235.0	1.10	102.00	235.0	0.3	1.3	0.9	1.38	1.29		
266.0	1.50	108.90	266.0	0.1	1.9	1.5	1.38	1.29		
297.0	2.00	110.30	297.0	-0.2	2.8	2.4	1.62	1.61		
326.0	2.60	120.50	325.9	-0.7	3.9	3.6	2.50	2.07		
357.0	3.30	122.90	356.9	-1.6	5.2	5.2	2.29	2.26		
388.0	3.50	126.30	387.9	-2.6	6.7	7.0	0.92	0.65		
418.0	3.70	125.00	417.8	-3.7	8.3	8.9	0.72	0.67		
449.0	3.80	127.10	448.7	-4.9	9.9	10.9	0.55	0.32		
480.0	3.90	130.30	479.7	-6.2	11.5	13.0	0.76	0.32		
510.0	3.70	131.10	509.6	-7.5	13.0	15.0	0.69	-0.67		

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8508A-36 B36 496
Project:	Story Gulch	TVD Reference:	WELL @ 8374.0ft (Patterson 308)
Site:	S36-T4S-R96W (B36 496)	MD Reference:	WELL @ 8374.0ft (Patterson 308)
Well:	SGU 8508A-36 B36 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
542.0	3.70	130.50	541.5	-8.8	14.6	17.0	0.12	0.00	
574.0	4.10	129.20	573.4	-10.2	16.3	19.2	1.28	1.25	
606.0	4.60	123.30	605.4	-11.7	18.2	21.6	2.09	1.56	
637.0	4.60	122.70	636.3	-13.0	20.3	24.1	0.16	0.00	
669.0	4.80	123.90	668.1	-14.5	22.5	26.7	0.70	0.62	
701.0	4.90	123.90	700.0	-16.0	24.8	29.4	0.31	0.31	
796.0	6.40	130.10	794.6	-21.6	32.2	38.8	1.70	1.58	
891.0	8.30	131.50	888.8	-29.6	41.4	50.9	2.01	2.00	
986.0	8.70	134.60	982.7	-39.2	51.6	64.8	0.64	0.42	
1,081.0	8.30	122.80	1,076.7	-48.0	62.5	78.7	1.88	-0.42	
1,176.0	7.50	117.80	1,170.8	-54.6	73.7	91.7	1.11	-0.84	
1,271.0	7.90	123.30	1,265.0	-61.0	84.7	104.4	0.88	0.42	
1,366.0	7.30	125.00	1,359.1	-68.1	95.1	116.9	0.67	-0.63	
1,461.0	8.70	120.50	1,453.2	-75.2	106.2	130.1	1.61	1.47	
1,556.0	8.80	120.50	1,547.1	-82.5	118.7	144.5	0.11	0.11	
1,651.0	7.90	121.30	1,641.1	-89.6	130.5	158.3	0.96	-0.95	
1,746.0	8.80	117.40	1,735.1	-96.3	142.5	172.0	1.12	0.95	
1,841.0	9.40	116.20	1,828.9	-103.1	156.0	186.8	0.66	0.63	
1,936.0	8.90	121.00	1,922.7	-110.3	169.2	201.8	0.96	-0.53	
2,031.0	8.30	127.50	2,016.6	-118.3	181.0	215.9	1.20	-0.63	
2,126.0	7.30	127.90	2,110.7	-126.2	191.2	228.8	1.05	-1.05	
2,222.0	6.00	128.00	2,206.1	-133.0	199.9	239.9	1.35	-1.35	
2,317.0	6.50	124.50	2,300.5	-139.1	208.3	250.3	0.66	0.53	
2,412.0	7.70	127.80	2,394.8	-146.0	217.7	262.0	1.33	1.26	
2,507.0	8.60	130.90	2,488.8	-154.6	228.1	275.4	1.05	0.95	
2,602.0	8.00	131.40	2,582.8	-163.6	238.5	289.1	0.64	-0.63	
2,698.0	8.00	125.50	2,677.9	-171.9	248.9	302.4	0.85	0.00	
2,793.0	8.30	124.20	2,771.9	-179.6	260.0	315.9	0.37	0.32	
2,888.0	9.30	124.30	2,865.8	-187.8	272.0	330.4	1.05	1.05	
2,983.0	8.80	125.60	2,959.6	-196.3	284.2	345.4	0.57	-0.53	
3,081.0	7.20	125.30	3,056.7	-204.3	295.3	359.0	1.63	-1.63	
3,173.0	8.70	125.60	3,147.8	-211.6	305.7	371.7	1.63	1.63	
3,264.0	10.80	121.70	3,237.5	-220.1	318.5	387.1	2.42	2.31	
3,356.0	10.40	121.00	3,327.9	-228.9	333.0	404.0	0.46	-0.43	
3,447.0	10.20	125.30	3,417.4	-237.8	346.6	420.2	0.87	-0.22	
3,539.0	9.40	124.90	3,508.1	-246.8	359.4	435.9	0.87	-0.87	
3,631.0	9.20	122.30	3,598.9	-255.1	371.8	450.7	0.51	-0.22	
3,723.0	8.90	131.00	3,689.7	-263.7	383.4	465.2	1.52	-0.33	
3,814.0	7.70	130.50	3,779.8	-272.2	393.3	478.2	1.32	-1.32	
3,906.0	8.60	120.60	3,870.9	-279.7	403.9	491.2	1.81	0.98	
3,997.0	8.90	124.20	3,960.8	-287.2	415.6	505.1	0.69	0.33	
4,089.0	8.10	126.30	4,051.8	-295.0	426.7	518.6	0.93	-0.87	
4,180.0	9.20	119.60	4,141.8	-302.4	438.2	532.3	1.64	1.21	
4,272.0	9.30	125.90	4,232.6	-310.4	450.6	547.0	1.11	0.11	
4,363.0	9.10	125.30	4,322.4	-318.8	462.5	561.6	0.24	-0.22	
4,455.0	7.80	124.30	4,413.4	-326.6	473.6	575.1	1.42	-1.41	
4,547.0	8.80	125.00	4,504.4	-334.1	484.5	588.4	1.09	1.09	
4,638.0	8.00	124.80	4,594.4	-341.7	495.4	601.7	0.88	-0.88	
4,729.0	9.00	126.00	4,684.4	-349.5	506.4	615.1	1.12	1.10	
4,821.0	8.00	126.00	4,775.4	-357.5	517.4	628.7	1.09	-1.09	
4,912.0	9.30	119.60	4,865.4	-364.9	528.9	642.4	1.78	1.43	
5,004.0	9.80	121.40	4,956.1	-372.6	542.0	657.6	0.63	0.54	
5,096.0	9.80	127.10	5,046.8	-381.4	554.9	673.2	1.05	0.00	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8508A-36 B36 496
Project:	Story Gulch	TVD Reference:	WELL @ 8374.0ft (Patterson 308)
Site:	S36-T4S-R96W (B36 496)	MD Reference:	WELL @ 8374.0ft (Patterson 308)
Well:	SGU 8508A-36 B36 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
5,187.0	8.80	127.40	5,136.6	-390.3	566.7	687.9	1.10	-1.10	
5,279.0	8.10	125.40	5,227.6	-398.4	577.5	701.4	0.83	-0.76	
5,371.0	9.10	121.50	5,318.6	-405.9	589.0	715.1	1.26	1.09	
5,463.0	9.30	131.30	5,409.4	-414.6	600.8	729.8	1.71	0.22	
5,554.0	8.40	130.00	5,499.3	-423.7	611.4	743.7	1.01	-0.99	
5,646.0	9.50	127.20	5,590.2	-432.7	622.6	758.0	1.29	1.20	
5,738.0	8.60	128.20	5,681.0	-441.5	634.1	772.5	0.99	-0.98	
5,830.0	8.80	121.70	5,772.0	-449.5	645.5	786.4	1.09	0.22	
5,922.0	7.70	124.80	5,863.0	-456.7	656.5	799.6	1.29	-1.20	
6,013.0	8.80	117.70	5,953.1	-463.4	667.7	812.6	1.65	1.21	
6,105.0	7.60	118.80	6,044.1	-469.6	679.2	825.6	1.32	-1.30	
6,197.0	8.40	119.30	6,135.2	-475.8	690.4	838.3	0.87	0.87	
6,288.0	8.10	121.70	6,225.3	-482.4	701.7	851.3	0.50	-0.33	
6,380.0	8.90	116.20	6,316.3	-489.0	713.6	864.7	1.24	0.87	
6,472.0	7.80	117.80	6,407.3	-495.0	725.5	877.9	1.22	-1.20	
6,563.0	8.10	117.00	6,497.4	-500.8	736.7	890.4	0.35	0.33	
6,655.0	7.50	126.20	6,588.6	-507.3	747.3	902.8	1.50	-0.65	
6,747.0	7.70	126.10	6,679.8	-514.5	757.1	915.0	0.22	0.22	
6,838.0	8.70	130.60	6,769.8	-522.6	767.3	927.9	1.30	1.10	
6,930.0	9.20	130.70	6,860.7	-531.9	778.1	942.2	0.54	0.54	
7,022.0	8.40	132.90	6,951.6	-541.3	788.6	956.2	0.94	-0.87	
7,113.0	9.80	127.90	7,041.5	-550.5	799.6	970.5	1.77	1.54	
7,205.0	9.20	126.60	7,132.2	-559.7	811.7	985.7	0.69	-0.65	
7,296.0	8.90	127.50	7,222.1	-568.4	823.1	1,000.0	0.36	-0.33	
7,387.0	10.20	121.90	7,311.8	-576.9	835.5	1,015.1	1.75	1.43	
7,479.0	10.00	121.30	7,402.4	-585.4	849.3	1,031.2	0.25	-0.22	
7,571.0	9.80	122.40	7,493.0	-593.7	862.7	1,047.0	0.30	-0.22	
7,662.0	9.00	121.70	7,582.8	-601.6	875.3	1,061.8	0.89	-0.88	
7,754.0	8.50	124.30	7,673.7	-609.2	887.0	1,075.8	0.69	-0.54	
7,845.0	8.20	124.00	7,763.8	-616.6	898.0	1,089.0	0.33	-0.33	
7,937.0	7.70	125.90	7,854.9	-623.9	908.4	1,101.7	0.61	-0.54	
8,028.0	7.40	126.80	7,945.1	-631.0	918.0	1,113.6	0.35	-0.33	
8,120.0	6.40	128.70	8,036.4	-637.7	926.8	1,124.7	1.11	-1.09	
8,212.0	6.10	130.30	8,127.9	-644.1	934.5	1,134.7	0.38	-0.33	
8,303.0	6.60	124.80	8,218.3	-650.2	942.5	1,144.7	0.86	0.55	
8,395.0	6.10	125.30	8,309.8	-656.1	950.8	1,154.9	0.55	-0.54	
8,486.0	4.20	129.10	8,400.4	-661.0	957.4	1,163.1	2.12	-2.09	
8,577.0	4.10	128.20	8,491.2	-665.1	962.5	1,169.6	0.13	-0.11	
8,669.0	2.10	135.70	8,583.0	-668.3	966.3	1,174.6	2.21	-2.17	
8,760.0	2.20	146.00	8,674.0	-671.0	968.4	1,177.9	0.44	0.11	
8,852.0	1.20	138.60	8,765.9	-673.1	970.0	1,180.5	1.11	-1.09	
8,944.0	0.70	339.40	8,857.9	-673.3	970.5	1,180.9	2.03	-0.54	
9,035.0	0.10	5.10	8,948.9	-672.7	970.3	1,180.4	0.67	-0.66	
9,127.0	0.50	234.30	9,040.9	-672.9	970.0	1,180.3	0.62	0.43	
9,218.0	1.30	224.90	9,131.9	-673.9	968.9	1,180.0	0.89	0.88	
9,310.0	1.50	212.40	9,223.9	-675.6	967.5	1,179.9	0.40	0.22	
9,402.0	0.50	31.80	9,315.9	-676.3	967.1	1,179.9	2.17	-1.09	
9,487.0	0.50	44.20	9,400.9	-675.7	967.6	1,180.0	0.13	0.00	
9,579.0	1.30	26.60	9,492.8	-674.5	968.3	1,179.9	0.91	0.87	
9,671.0	0.90	36.80	9,584.8	-673.0	969.2	1,179.7	0.48	-0.43	
9,762.0	0.70	75.90	9,675.8	-672.3	970.2	1,180.1	0.62	-0.22	
9,854.0	1.10	23.70	9,767.8	-671.3	971.1	1,180.2	0.95	0.43	
9,946.0	0.40	12.00	9,859.8	-670.2	971.5	1,179.9	0.77	-0.76	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8508A-36 B36 496
Project:	Story Gulch	TVD Reference:	WELL @ 8374.0ft (Patterson 308)
Site:	S36-T4S-R96W (B36 496)	MD Reference:	WELL @ 8374.0ft (Patterson 308)
Well:	SGU 8508A-36 B36 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
10,037.0	0.10	243.10	9,950.8	-669.9	971.5	1,179.8	0.52	-0.33	
10,129.0	0.90	43.70	10,042.8	-669.4	971.9	1,179.8	1.08	0.87	
10,220.0	0.60	63.80	10,133.8	-668.7	972.8	1,180.1	0.43	-0.33	
10,312.0	0.30	84.10	10,225.8	-668.5	973.5	1,180.5	0.36	-0.33	
10,404.0	0.40	200.20	10,317.8	-668.7	973.6	1,180.8	0.65	0.11	
10,495.0	0.40	1.10	10,408.8	-668.7	973.5	1,180.7	0.87	0.00	
10,587.0	0.20	350.30	10,500.8	-668.2	973.5	1,180.4	0.22	-0.22	
10,678.0	0.10	236.80	10,591.8	-668.1	973.4	1,180.3	0.28	-0.11	
10,770.0	0.50	213.00	10,683.8	-668.5	973.1	1,180.3	0.45	0.43	
10,861.0	0.70	293.50	10,774.8	-668.6	972.4	1,179.7	0.87	0.22	
10,953.0	1.20	266.90	10,866.8	-668.5	970.9	1,178.5	0.71	0.54	
11,045.0	0.30	299.60	10,958.8	-668.4	969.8	1,177.5	1.04	-0.98	
11,136.0	0.40	254.50	11,049.8	-668.4	969.2	1,177.0	0.31	0.11	
11,228.0	0.50	228.60	11,141.8	-668.7	968.6	1,176.7	0.24	0.11	
11,320.0	1.00	226.40	11,233.7	-669.5	967.8	1,176.5	0.54	0.54	
11,411.0	1.00	250.70	11,324.7	-670.3	966.4	1,175.9	0.46	0.00	
11,503.0	0.60	306.60	11,416.7	-670.3	965.3	1,175.0	0.90	-0.43	
11,594.0	1.20	262.50	11,507.7	-670.2	964.0	1,173.8	0.96	0.66	
11,686.0	1.30	252.70	11,599.7	-670.6	962.0	1,172.5	0.26	0.11	
11,777.0	1.40	247.20	11,690.7	-671.3	960.0	1,171.3	0.18	0.11	
11,869.0	1.90	229.10	11,782.6	-672.8	957.8	1,170.3	0.78	0.54	
11,961.0	2.40	215.80	11,874.6	-675.3	955.5	1,170.0	0.76	0.54	
12,052.0	3.00	222.30	11,965.5	-678.6	952.8	1,169.7	0.74	0.66	
12,180.0	3.30	224.50	12,093.3	-683.7	948.0	1,168.8	0.25	0.23	Last Cathedral Survey @ 12,180' MD
12,240.0	3.30	224.50	12,153.2	-686.2	945.6	1,168.3	0.00	0.00	Projection to Bit @ 12,240'

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
8508A-36 TOG - hit/miss target - Shape	0.00	0.00	8,755.0	-670.6	972.7	1,676,616.87	2,265,293.67	39° 39' 43.66 N	108° 6' 36.09 W
- survey misses target center by 3.7ft at 8841.1ft MD (8755.0 TVD, -673.0 N, 969.9 E)									
- Point									
8508A-36 PBHL - survey misses target center by 4.6ft at 12101.4ft MD (12014.8 TVD, -680.6 N, 951.0 E)	0.00	0.00	12,015.0	-680.6	955.7	1,676,607.35	2,265,276.36	39° 39' 43.56 N	108° 6' 36.31 W
- Rectangle (sides W30.0 H50.0 D0.0)									

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
12,180.0	12,093.3	-683.7	948.0	Last Cathedral Survey @ 12,180' MD	
12,240.0	12,153.2	-686.2	945.6	Projection to Bit @ 12,240'	

Checked By: _____	Approved By: _____	Date: _____
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