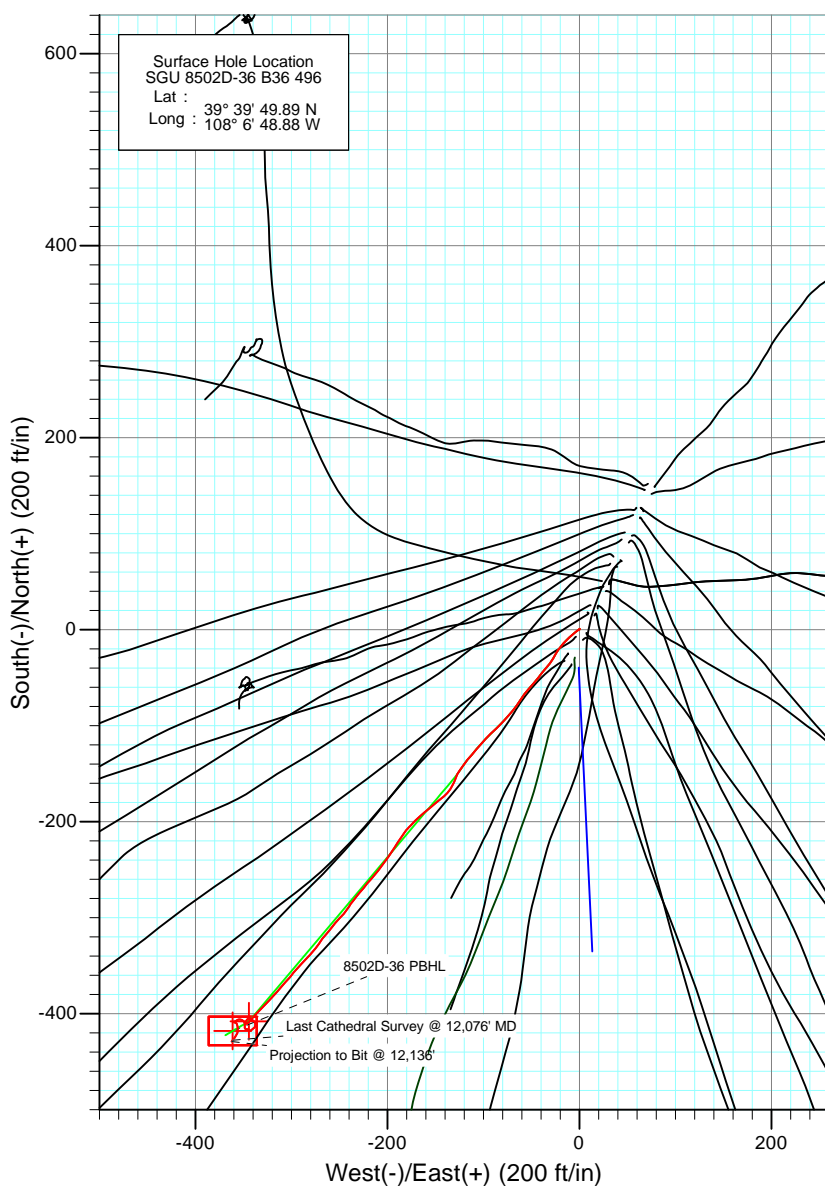
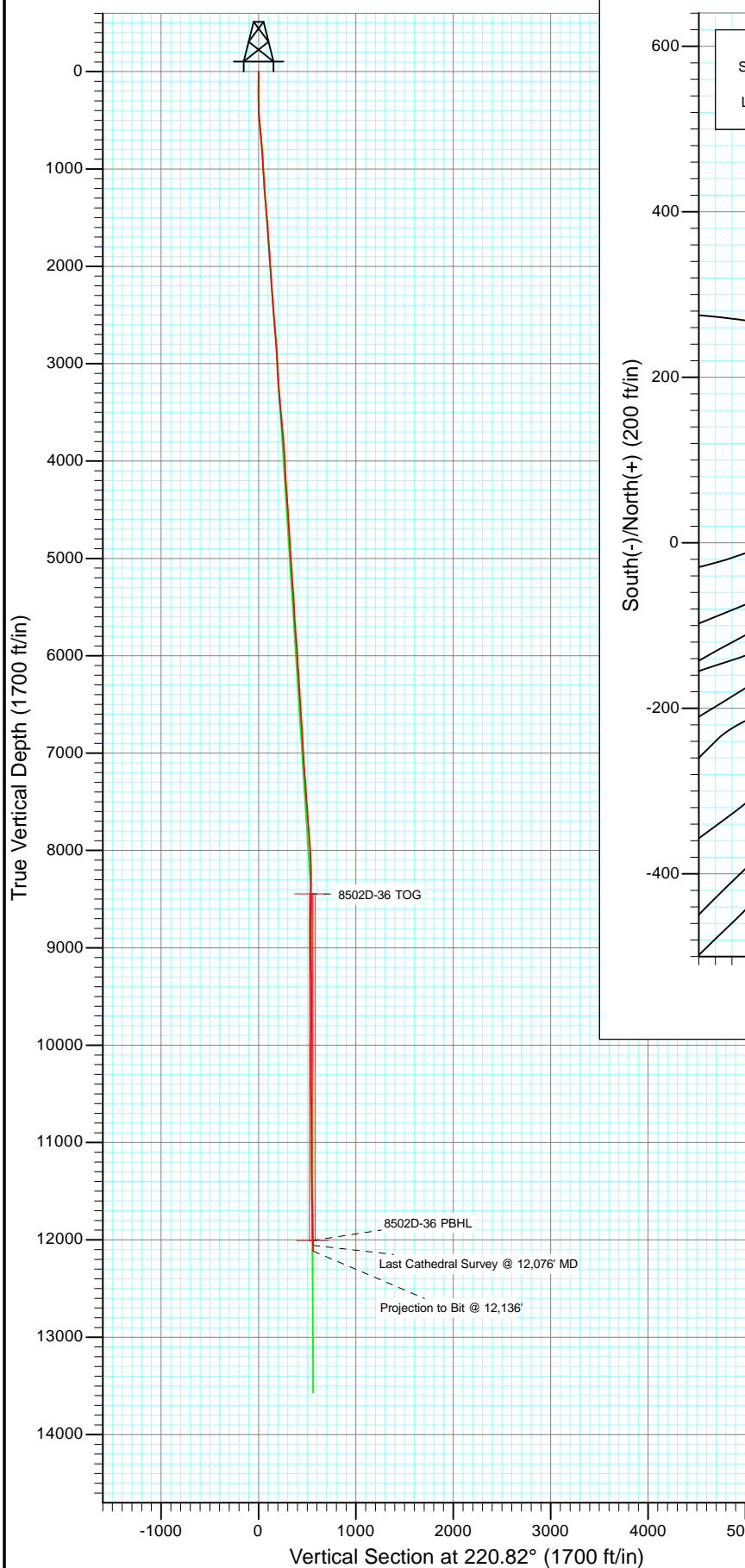




Project: Story Gulch
 Site: S36-T4S-R96W (B36 496)
 Well: SGU 8502D-36 B36 496
 Wellbore: DD
 Design: FINAL



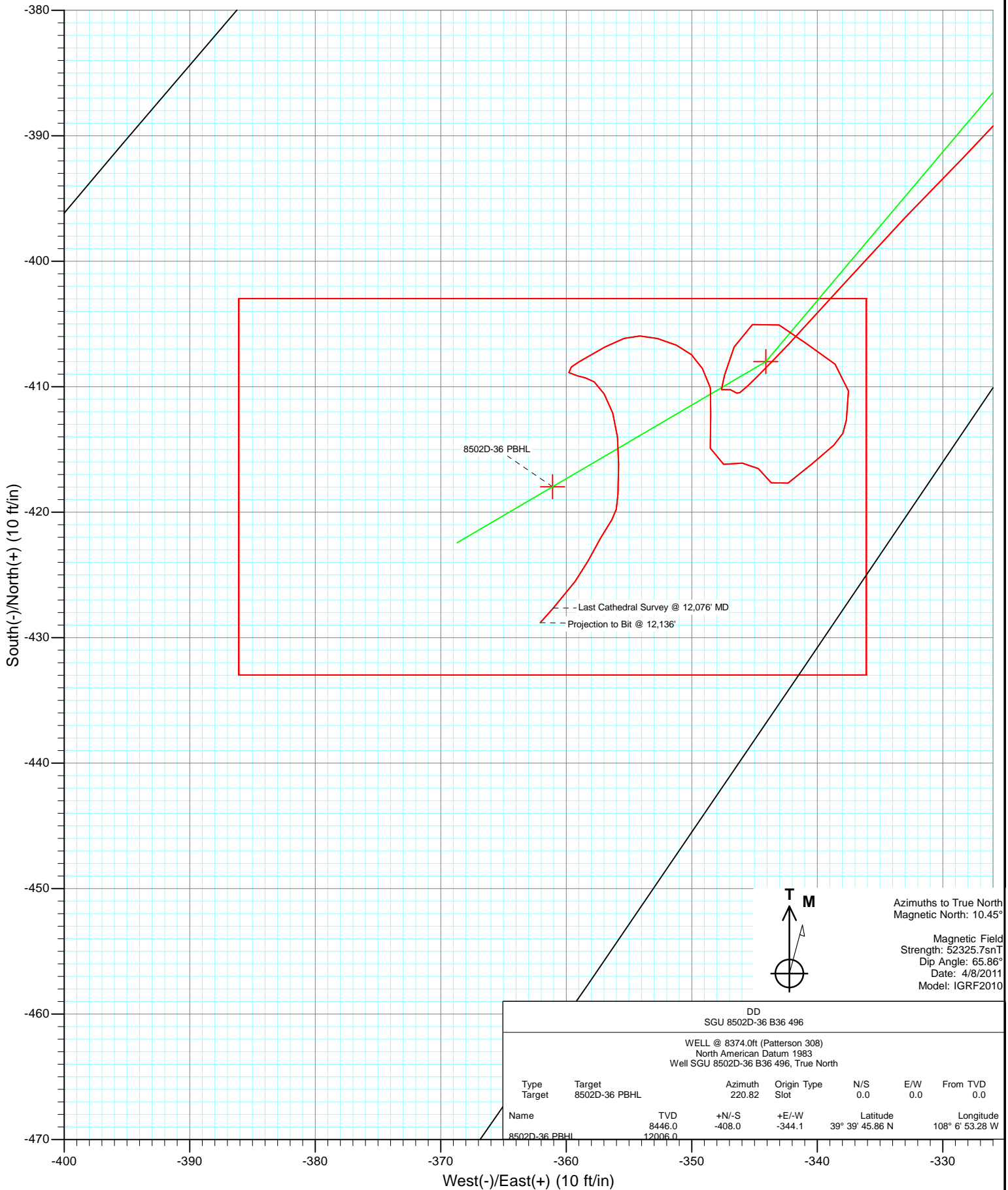
Azimuths to True North
 Magnetic North: 10.45°

Magnetic Field
 Strength: 52325.7nT
 Dip Angle: 65.86°
 Date: 4/8/2011
 Model: IGRF2010

DD SGU 8502D-36 B36 496					
WELL @ 8374.0ft (Patterson 308) North American Datum 1983 Well SGU 8502D-36 B36 496, True North					
Target	Azimuth	Origin Type	N/S	E/W	From TVD
8502D-36 PBHL	220.82	Slot	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
8502D-36 PBHL	12006.0	-418.0	-361.1	39° 39' 45.76 N	108° 6' 53.50 W



Project: Story Gulch
Site: S36-T4S-R96W (B36 496)
Well: SGU 8502D-36 B36 496
Wellbore: DD
Design: FINAL



Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8502D-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 8502D-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 8502D-36 B36 496					
Well Position	+N/-S	0.0 ft	Northing:	1,677,275.93 ft	Latitude:	39° 39' 49.89 N
	+E/-W	0.0 ft	Easting:	2,264,311.95 ft	Longitude:	108° 6' 48.88 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	4/8/2011	10.45	65.86	52,326

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	220.82	

Survey Program	Date	4/20/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
200.0	12,136.0	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		
200.0	0.50	34.10	200.0	0.7	0.5	-0.9	0.25	0.25		
231.0	0.30	301.90	231.0	0.9	0.5	-1.0	1.91	-0.65		
262.0	0.40	216.80	262.0	0.8	0.4	-0.9	1.55	0.32		
292.0	0.70	242.30	292.0	0.7	0.1	-0.6	1.27	1.00		
322.0	0.80	233.10	322.0	0.5	-0.2	-0.2	0.52	0.33		
353.0	1.50	231.80	353.0	0.1	-0.7	0.4	2.26	2.26		
383.0	1.90	231.10	383.0	-0.5	-1.4	1.3	1.34	1.33		
414.0	2.90	233.30	413.9	-1.3	-2.4	2.5	3.24	3.23		
506.0	5.20	228.10	505.7	-5.4	-7.4	8.9	2.53	2.50		
601.0	5.90	226.40	600.3	-11.7	-14.1	18.1	0.76	0.74		
696.0	4.90	214.60	694.8	-18.4	-20.0	27.0	1.57	-1.05		
791.0	4.10	212.70	789.6	-24.6	-24.1	34.4	0.86	-0.84		

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8502D-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 8502D-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
886.0	3.60	209.40	884.3	-30.1	-27.4	40.7	0.58	-0.53	
981.0	3.80	216.40	979.1	-35.2	-30.7	46.7	0.52	0.21	
1,076.0	3.90	223.30	1,073.9	-40.1	-34.8	53.1	0.50	0.11	
1,171.0	3.40	217.30	1,168.7	-44.7	-38.7	59.1	0.66	-0.53	
1,266.0	4.60	218.20	1,263.5	-49.9	-42.8	65.7	1.26	1.26	
1,361.0	4.70	220.30	1,358.2	-55.9	-47.7	73.4	0.21	0.11	
1,456.0	4.70	221.50	1,452.9	-61.7	-52.8	81.2	0.10	0.00	
1,551.0	4.40	216.90	1,547.6	-67.6	-57.5	88.7	0.50	-0.32	
1,646.0	4.30	211.50	1,642.3	-73.5	-61.6	95.9	0.44	-0.11	
1,742.0	3.70	214.70	1,738.1	-79.1	-65.2	102.5	0.67	-0.62	
1,837.0	4.00	220.40	1,832.8	-84.2	-69.1	108.9	0.51	0.32	
1,932.0	3.90	222.10	1,927.6	-89.1	-73.4	115.4	0.16	-0.11	
2,027.0	3.50	221.30	2,022.4	-93.7	-77.5	121.6	0.42	-0.42	
2,122.0	3.80	225.00	2,117.2	-98.1	-81.7	127.6	0.40	0.32	
2,217.0	4.80	225.90	2,212.0	-103.1	-86.7	134.7	1.05	1.05	
2,312.0	4.80	227.10	2,306.6	-108.5	-92.5	142.6	0.11	0.00	
2,408.0	4.30	221.70	2,402.3	-114.0	-97.8	150.2	0.69	-0.52	
2,503.0	3.80	220.70	2,497.1	-119.0	-102.3	156.9	0.53	-0.53	
2,598.0	4.50	222.10	2,591.8	-124.2	-106.8	163.8	0.74	0.74	
2,693.0	4.70	219.80	2,686.5	-129.9	-111.8	171.4	0.29	0.21	
2,789.0	4.40	219.30	2,782.2	-135.8	-116.6	179.0	0.32	-0.31	
2,884.0	3.70	216.90	2,877.0	-141.1	-120.8	185.7	0.76	-0.74	
2,990.0	3.40	212.60	2,982.8	-146.4	-124.5	192.2	0.38	-0.28	
3,172.0	2.40	198.90	3,164.6	-154.6	-128.7	201.1	0.66	-0.55	
3,264.0	4.10	205.20	3,256.4	-159.4	-130.7	206.1	1.89	1.85	
3,355.0	5.90	212.30	3,347.1	-166.3	-134.6	213.8	2.09	1.98	
3,447.0	6.10	230.40	3,438.6	-173.4	-140.9	223.3	2.06	0.22	
3,539.0	5.90	229.70	3,530.1	-179.6	-148.3	232.8	0.23	-0.22	
3,630.0	5.30	231.80	3,620.6	-185.2	-155.1	241.6	0.70	-0.66	
3,722.0	4.70	229.10	3,712.3	-190.3	-161.3	249.5	0.70	-0.65	
3,814.0	4.20	229.80	3,804.0	-194.9	-166.7	256.5	0.55	-0.54	
3,905.0	3.40	222.40	3,894.8	-199.1	-171.1	262.5	1.03	-0.88	
3,997.0	3.20	223.50	3,986.6	-203.0	-174.7	267.8	0.23	-0.22	
4,088.0	2.50	225.60	4,077.5	-206.2	-177.9	272.3	0.78	-0.77	
4,180.0	4.60	216.10	4,169.3	-210.6	-181.5	278.0	2.36	2.28	
4,271.0	4.10	214.50	4,260.1	-216.2	-185.5	284.9	0.57	-0.55	
4,363.0	4.00	212.20	4,351.9	-221.6	-189.1	291.3	0.21	-0.11	
4,454.0	3.90	213.20	4,442.6	-226.9	-192.4	297.5	0.13	-0.11	
4,546.0	3.60	215.70	4,534.4	-231.9	-195.8	303.5	0.37	-0.33	
4,638.0	3.40	215.20	4,626.3	-236.4	-199.1	309.1	0.22	-0.22	
4,729.0	3.10	212.90	4,717.1	-240.7	-202.0	314.2	0.36	-0.33	
4,820.0	2.50	213.70	4,808.0	-244.4	-204.4	318.6	0.66	-0.66	
4,912.0	4.50	218.10	4,899.8	-248.9	-207.8	324.2	2.19	2.17	
5,004.0	4.30	221.80	4,991.6	-254.4	-212.3	331.3	0.38	-0.22	
5,095.0	4.10	223.70	5,082.3	-259.3	-216.8	337.9	0.27	-0.22	
5,187.0	3.90	215.60	5,174.1	-264.2	-220.9	344.3	0.65	-0.22	
5,279.0	3.80	219.20	5,265.9	-269.1	-224.7	350.5	0.28	-0.11	
5,370.0	3.50	222.00	5,356.7	-273.5	-228.4	356.3	0.38	-0.33	
5,462.0	3.60	217.40	5,448.5	-277.9	-232.1	362.0	0.33	0.11	
5,554.0	3.00	217.50	5,540.4	-282.1	-235.3	367.3	0.65	-0.65	
5,646.0	2.70	215.90	5,632.3	-285.7	-238.0	371.8	0.34	-0.33	
5,737.0	4.20	212.20	5,723.1	-290.3	-241.0	377.2	1.67	1.65	
5,829.0	4.50	222.20	5,814.8	-295.8	-245.3	384.2	0.89	0.33	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8502D-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 8502D-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
5,921.0	4.20	224.80	5,906.6	-300.9	-250.1	391.2	0.39	-0.33	
6,013.0	3.70	217.30	5,998.3	-305.6	-254.2	397.5	0.78	-0.54	
6,104.0	3.60	219.80	6,089.2	-310.2	-257.8	403.3	0.21	-0.11	
6,196.0	3.30	216.50	6,181.0	-314.5	-261.3	408.8	0.39	-0.33	
6,288.0	4.40	225.00	6,272.8	-319.1	-265.3	415.0	1.34	1.20	
6,379.0	3.80	209.60	6,363.6	-324.2	-269.3	421.4	1.37	-0.66	
6,471.0	3.40	219.80	6,455.4	-329.0	-272.5	427.1	0.82	-0.43	
6,563.0	3.10	214.40	6,547.2	-333.1	-275.7	432.3	0.47	-0.33	
6,654.0	3.90	223.10	6,638.1	-337.4	-279.2	437.9	1.05	0.88	
6,746.0	3.30	227.50	6,729.9	-341.5	-283.3	443.6	0.72	-0.65	
6,838.0	3.10	220.10	6,821.7	-345.2	-286.8	448.7	0.50	-0.22	
6,929.0	3.10	220.90	6,912.6	-348.9	-290.0	453.6	0.05	0.00	
7,021.0	2.90	226.00	7,004.5	-352.4	-293.3	458.5	0.36	-0.22	
7,112.0	4.40	218.40	7,095.3	-356.7	-297.2	464.2	1.73	1.65	
7,204.0	4.20	221.40	7,187.0	-362.0	-301.6	471.1	0.33	-0.22	
7,295.0	4.30	222.40	7,277.8	-367.1	-306.1	477.9	0.14	0.11	
7,386.0	4.10	218.60	7,368.5	-372.1	-310.4	484.5	0.38	-0.22	
7,478.0	4.00	221.30	7,460.3	-377.1	-314.6	491.0	0.23	-0.11	
7,570.0	4.30	224.10	7,552.1	-382.0	-319.1	497.7	0.39	0.33	
7,661.0	4.30	223.10	7,642.8	-386.9	-323.8	504.5	0.08	0.00	
7,753.0	4.00	223.90	7,734.6	-391.8	-328.4	511.1	0.33	-0.33	
7,844.0	4.40	224.20	7,825.3	-396.6	-333.0	517.8	0.44	0.44	
7,936.0	4.30	221.10	7,917.1	-401.7	-337.8	524.8	0.28	-0.11	
8,027.0	4.20	223.90	8,007.8	-406.7	-342.3	531.5	0.25	-0.11	
8,119.0	1.50	226.20	8,099.7	-409.9	-345.5	536.1	2.94	-2.93	
8,211.0	0.30	354.60	8,191.7	-410.5	-346.4	537.1	1.85	-1.30	
8,302.0	0.60	274.70	8,282.7	-410.2	-346.9	537.2	0.68	0.33	
8,394.0	0.30	263.40	8,374.7	-410.2	-347.6	537.7	0.34	-0.33	
8,485.0	1.60	22.30	8,465.7	-409.1	-347.4	536.7	1.94	1.43	
8,576.0	1.40	14.80	8,556.6	-406.8	-346.6	534.4	0.31	-0.22	
8,668.0	1.70	59.60	8,648.6	-405.0	-345.2	532.1	1.32	0.33	
8,759.0	1.50	126.80	8,739.6	-405.1	-343.0	530.8	1.95	-0.22	
8,851.0	1.70	122.00	8,831.5	-406.5	-340.9	530.5	0.26	0.22	
8,943.0	1.90	129.00	8,923.5	-408.2	-338.6	530.2	0.32	0.22	
9,034.0	1.50	185.20	9,014.5	-410.3	-337.5	531.2	1.80	-0.44	
9,126.0	1.40	183.00	9,106.4	-412.7	-337.7	533.0	0.12	-0.11	
9,218.0	1.60	227.20	9,198.4	-414.7	-338.7	535.2	1.24	0.22	
9,304.0	1.50	231.80	9,284.4	-416.2	-340.4	537.5	0.19	-0.12	
9,396.0	1.50	230.80	9,376.3	-417.7	-342.3	539.8	0.03	0.00	
9,487.0	1.10	331.90	9,467.3	-417.7	-343.7	540.7	2.22	-0.44	
9,579.0	0.90	299.90	9,559.3	-416.5	-344.7	540.5	0.63	-0.22	
9,671.0	0.80	275.90	9,651.3	-416.1	-346.0	541.0	0.40	-0.11	
9,762.0	1.10	260.20	9,742.3	-416.2	-347.5	542.1	0.43	0.33	
9,854.0	1.80	352.30	9,834.3	-414.9	-348.5	541.8	2.33	0.76	
9,946.0	1.60	10.10	9,926.2	-412.2	-348.5	539.7	0.61	-0.22	
10,037.0	1.10	344.10	10,017.2	-410.1	-348.5	538.2	0.86	-0.55	
10,129.0	1.00	330.10	10,109.2	-408.6	-349.1	537.4	0.30	-0.11	
10,220.0	0.80	312.20	10,200.2	-407.4	-350.0	537.1	0.38	-0.22	
10,312.0	1.00	294.40	10,292.2	-406.7	-351.2	537.3	0.37	0.22	
10,404.0	1.00	283.90	10,384.1	-406.2	-352.7	537.9	0.20	0.00	
10,495.0	0.80	271.00	10,475.1	-406.0	-354.1	538.7	0.31	-0.22	
10,587.0	0.80	251.70	10,567.1	-406.1	-355.4	539.7	0.29	0.00	
10,678.0	1.30	242.40	10,658.1	-406.8	-356.9	541.2	0.58	0.55	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8502D-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 8502D-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
10,770.0	1.70	238.70	10,750.1	-408.0	-359.0	543.4	0.45	0.43	
10,861.0	0.50	112.80	10,841.1	-408.9	-359.8	544.6	2.24	-1.32	
10,953.0	0.40	108.10	10,933.1	-409.1	-359.1	544.4	0.12	-0.11	
11,045.0	0.40	100.40	11,025.1	-409.3	-358.5	544.1	0.06	0.00	
11,136.0	0.60	123.50	11,116.1	-409.6	-357.8	543.8	0.31	0.22	
11,228.0	1.00	150.10	11,208.0	-410.6	-357.0	544.1	0.58	0.43	
11,320.0	1.10	161.60	11,300.0	-412.1	-356.3	544.8	0.25	0.11	
11,411.0	1.40	174.20	11,391.0	-414.0	-355.9	546.0	0.45	0.33	
11,503.0	1.30	181.40	11,483.0	-416.2	-355.8	547.6	0.21	-0.11	
11,594.0	1.70	181.00	11,574.0	-418.6	-355.9	549.4	0.44	0.44	
11,686.0	1.00	214.90	11,665.9	-420.6	-356.4	551.2	1.12	-0.76	
11,777.0	1.20	209.40	11,756.9	-422.1	-357.3	553.0	0.25	0.22	
11,869.0	1.30	208.10	11,848.9	-423.8	-358.2	554.9	0.11	0.11	
11,960.0	1.20	216.50	11,939.9	-425.5	-359.3	556.9	0.23	-0.11	
12,076.0	1.50	221.50	12,055.8	-427.6	-361.0	559.6	0.28	0.26	Last Cathedral Survey @ 12,076' MD Projection to Bit @ 12,136'
12,136.0	1.50	221.50	12,115.8	-428.8	-362.1	561.2	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
8502D-36 PBHL	0.00	0.00	12,006.0	-418.0	-361.1	1,676,868.52	2,263,938.99	39° 39' 45.76 N	108° 6' 53.50 W
- hit/miss target									
- Shape									
- survey misses target center by 8.8ft at 12026.0ft MD (12005.9 TVD, -426.7 N, -360.2 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
8502D-36 TOG	0.00	0.00	8,446.0	-408.0	-344.1	1,676,877.99	2,263,956.26	39° 39' 45.86 N	108° 6' 53.28 W
- survey misses target center by 3.8ft at 8465.4ft MD (8446.0 TVD, -409.5 N, -347.6 E)									
- Point									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
12,076.0	12,055.8	-427.6	-361.0	Last Cathedral Survey @ 12,076' MD
12,136.0	12,115.8	-428.8	-362.1	Projection to Bit @ 12,136'

Checked By: _____	Approved By: _____	Date: _____
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