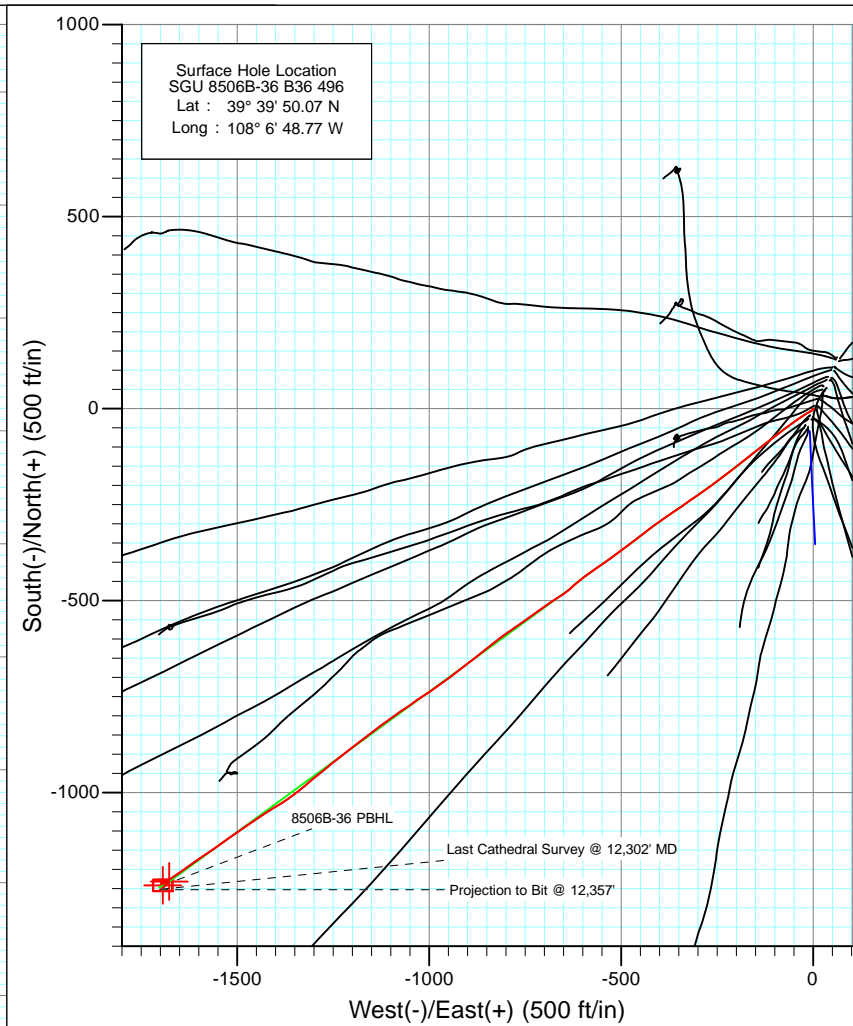
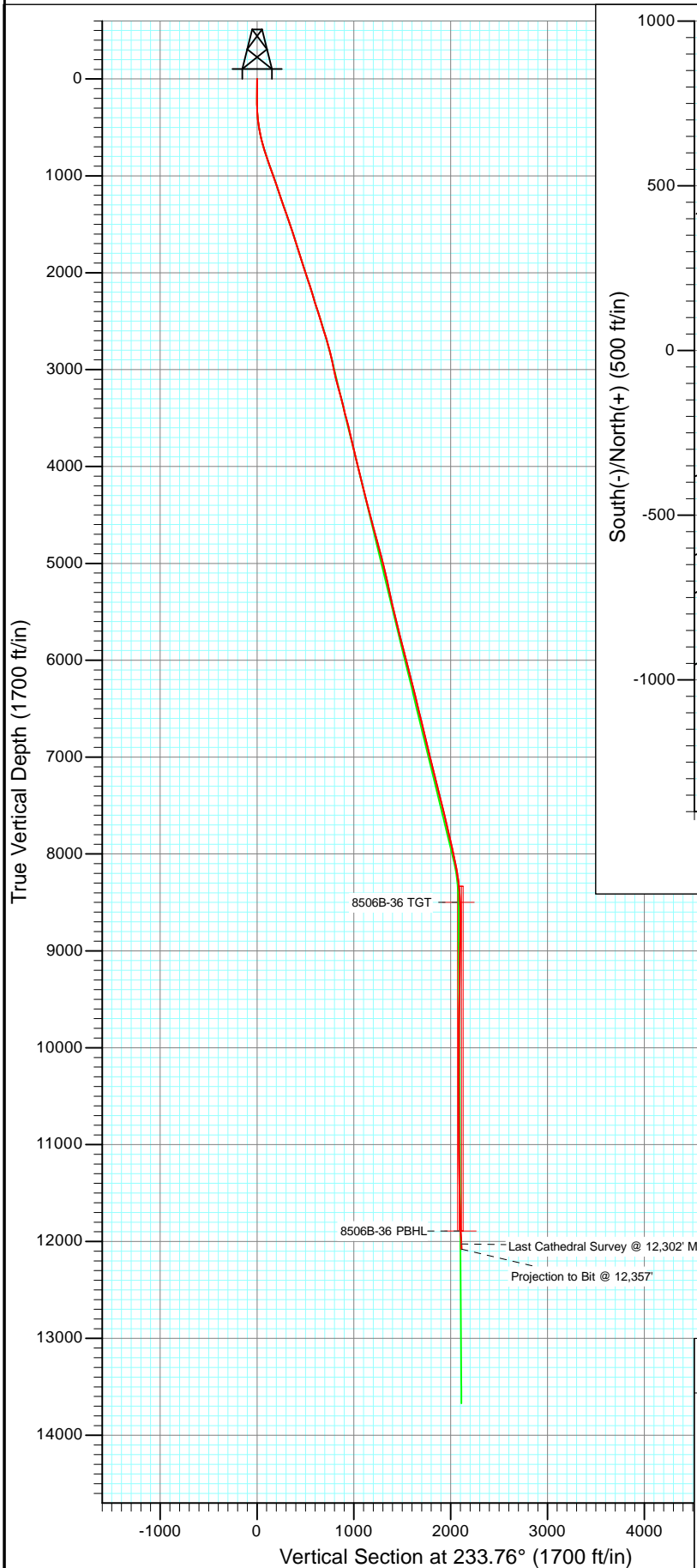




Project: Story Gulch
 Site: S36-T4S-R96W (B36 496)
 Well: SGU 8506B-36 B36 496
 Wellbore: DD
 Design: FINAL



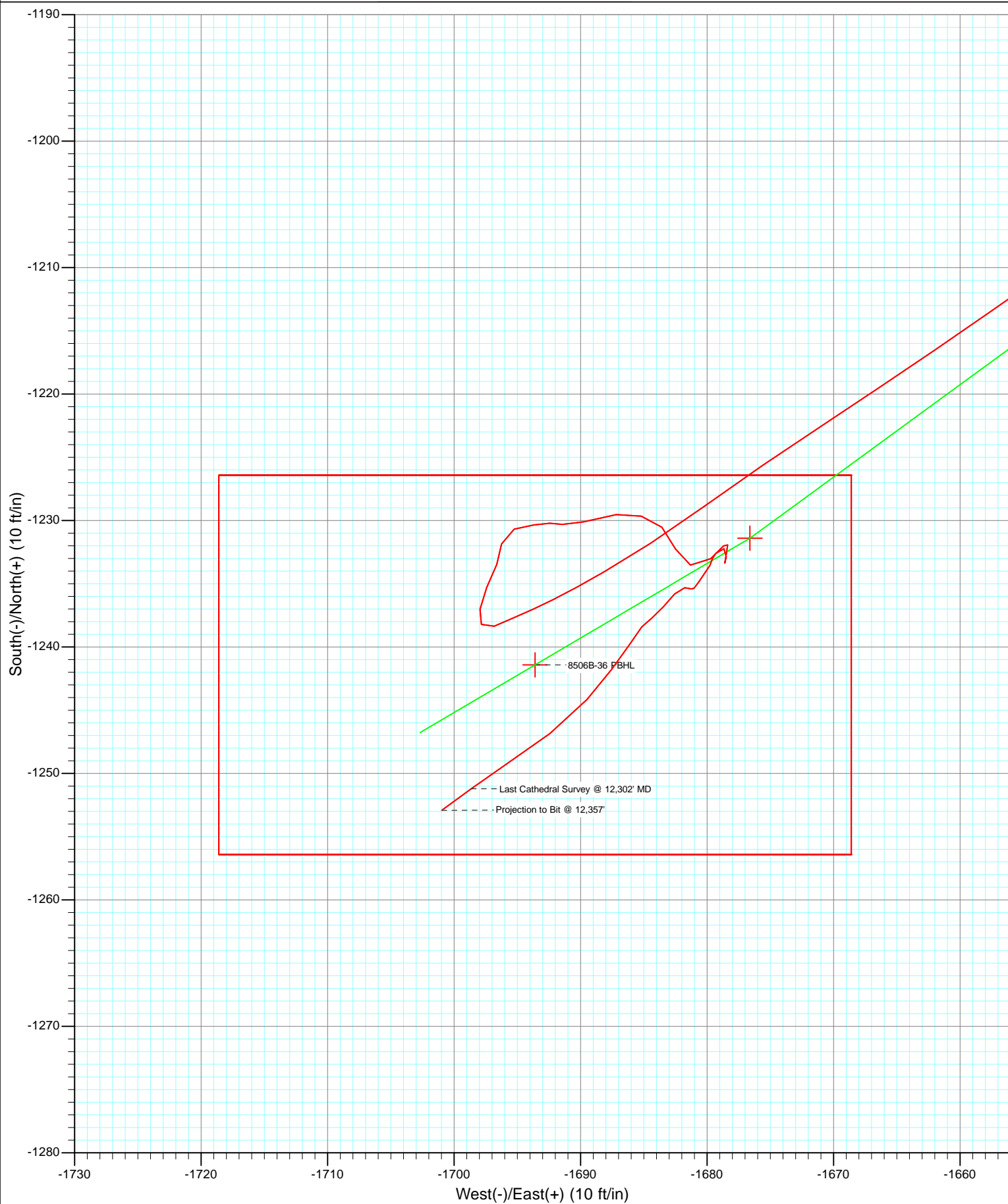
Azimuths to True North
 Magnetic North: 10.45°

Magnetic Field
 Strength: 52328.7snT
 Dip Angle: 65.86°
 Date: 3/28/2011
 Model: IGRF2010

DD SGU 8506B-36 B36 496 105490 (SH), 115140 (MH); LR						
WELL @ 8374.0ft (Patterson 308) North American Datum 1983 Well SGU 8506B-36 B36 496, True North						
Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
Target	8506B-36 PBHL	233.76	Slot	0.0	0.0	0.0
Name	TV	+N/-S	+E/-W	Latitude		Longitude
8506B-36 PBHL	8500.0 11893.0	-1241.4	-1693.6	39° 39' 37.80 N		108° 7' 10.43 W



Project: Story Gulch
Site: S36-T4S-R96W (B36 496)
Well: SGU 8506B-36 B36 496
Wellbore: DD
Design: FINAL



Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8506B-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 8506B-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 8506B-36 B36 496					
Well Position	+N/-S	0.0 ft	Northing:	1,677,293.75 ft	Latitude:	39° 39' 50.07 N
	+E/-W	0.0 ft	Easting:	2,264,320.93 ft	Longitude:	108° 6' 48.77 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	3/28/2011	10.45	65.86	52,329

Design	DD				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	233.76	

Survey Program	Date	4/8/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
200.0	12,357.0	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	0.60	122.30	200.0	-0.6	0.9	-0.4	0.30	0.30		
230.0	0.50	135.70	230.0	-0.7	1.1	-0.5	0.54	-0.33		
261.0	0.70	200.50	261.0	-1.0	1.1	-0.3	2.14	0.65		
292.0	1.50	222.70	292.0	-1.5	0.8	0.2	2.88	2.58		
322.0	2.50	229.30	322.0	-2.2	0.0	1.3	3.42	3.33		
352.0	3.60	238.10	351.9	-3.1	-1.3	2.9	3.97	3.67		
383.0	4.80	233.10	382.8	-4.4	-3.1	5.1	4.04	3.87		
414.0	6.10	239.80	413.7	-6.0	-5.6	8.1	4.66	4.19		
445.0	7.20	238.20	444.5	-7.9	-8.7	11.6	3.60	3.55		
475.0	8.30	242.90	474.2	-9.9	-12.2	15.7	4.23	3.67		
506.0	9.60	238.80	504.8	-12.2	-16.4	20.4	4.67	4.19		
538.0	10.60	235.60	536.3	-15.3	-21.1	26.0	3.58	3.12		

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8506B-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 8506B-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
569.0	12.00	236.70	566.7	-18.6	-26.1	32.1	4.57	4.52	
601.0	12.90	237.50	598.0	-22.4	-31.9	39.0	2.86	2.81	
633.0	14.00	235.90	629.1	-26.5	-38.2	46.4	3.63	3.44	
664.0	15.10	234.70	659.1	-30.9	-44.6	54.2	3.68	3.55	
696.0	16.10	234.80	689.9	-35.9	-51.6	62.8	3.13	3.12	
791.0	18.80	232.60	780.6	-52.8	-74.5	91.3	2.93	2.84	
886.0	19.00	232.60	870.4	-71.5	-99.0	122.1	0.21	0.21	
981.0	19.10	232.30	960.2	-90.4	-123.5	153.1	0.15	0.11	
1,171.0	19.00	230.50	1,139.8	-129.0	-172.0	215.0	0.31	-0.05	
1,266.0	19.00	233.10	1,229.7	-148.2	-196.3	245.9	0.89	0.00	
1,361.0	19.00	233.20	1,319.5	-166.7	-221.1	276.8	0.03	0.00	
1,456.0	19.00	232.10	1,409.3	-185.5	-245.6	307.8	0.38	0.00	
1,551.0	18.80	235.10	1,499.2	-203.7	-270.4	338.5	1.04	-0.21	
1,646.0	18.40	234.80	1,589.2	-221.1	-295.2	368.8	0.43	-0.42	
1,741.0	18.00	233.60	1,679.5	-238.5	-319.3	398.5	0.58	-0.42	
1,836.0	18.00	236.00	1,769.8	-255.4	-343.3	427.8	0.78	0.00	
1,931.0	17.30	236.60	1,860.4	-271.4	-367.2	456.6	0.76	-0.74	
2,027.0	17.70	235.20	1,951.9	-287.6	-391.1	485.5	0.60	0.42	
2,122.0	18.60	233.40	2,042.2	-304.9	-415.1	515.1	1.12	0.95	
2,217.0	17.40	231.90	2,132.5	-322.7	-438.5	544.4	1.35	-1.26	
2,312.0	17.20	232.90	2,223.2	-339.9	-460.9	572.6	0.38	-0.21	
2,407.0	17.60	233.60	2,313.9	-356.9	-483.6	601.0	0.48	0.42	
2,503.0	17.40	233.30	2,405.4	-374.1	-506.8	629.9	0.23	-0.21	
2,598.0	17.30	233.30	2,496.1	-391.0	-529.5	658.2	0.11	-0.11	
2,693.0	17.00	235.70	2,586.9	-407.3	-552.3	686.2	0.81	-0.32	
2,788.0	16.70	235.10	2,677.8	-422.9	-575.0	713.8	0.37	-0.32	
2,884.0	15.70	232.90	2,770.0	-438.6	-596.7	740.6	1.22	-1.04	
2,990.0	13.20	229.60	2,872.6	-455.1	-617.3	767.0	2.48	-2.36	
3,080.0	11.10	227.00	2,960.6	-467.7	-631.5	785.8	2.41	-2.33	
3,172.0	12.70	234.60	3,050.7	-479.6	-646.2	804.7	2.43	1.74	
3,263.0	15.00	236.90	3,139.0	-491.8	-664.2	826.5	2.60	2.53	
3,355.0	15.10	236.50	3,227.8	-504.9	-684.2	850.4	0.16	0.11	
3,446.0	14.60	234.70	3,315.8	-518.1	-703.4	873.7	0.75	-0.55	
3,538.0	13.70	233.90	3,405.0	-531.2	-721.7	896.1	1.00	-0.98	
3,630.0	14.90	235.00	3,494.2	-544.4	-740.2	918.9	1.34	1.30	
3,722.0	14.50	235.40	3,583.1	-557.8	-759.4	942.2	0.45	-0.43	
3,813.0	12.80	233.80	3,671.6	-570.2	-776.9	963.7	1.91	-1.87	
3,905.0	13.80	236.00	3,761.1	-582.3	-794.2	984.8	1.22	1.09	
3,996.0	14.20	233.40	3,849.4	-595.1	-812.2	1,006.8	0.82	0.44	
4,088.0	11.80	232.10	3,939.0	-607.6	-828.7	1,027.5	2.63	-2.61	
4,179.0	13.40	232.80	4,027.8	-619.7	-844.4	1,047.4	1.77	1.76	
4,271.0	13.40	229.50	4,117.3	-633.0	-861.0	1,068.7	0.83	0.00	
4,362.0	14.70	231.60	4,205.6	-647.1	-878.1	1,090.7	1.53	1.43	
4,454.0	14.10	232.10	4,294.7	-661.2	-896.1	1,113.6	0.67	-0.65	
4,546.0	15.50	231.80	4,383.7	-675.7	-914.6	1,137.1	1.52	1.52	
4,637.0	14.30	232.80	4,471.6	-690.0	-933.1	1,160.5	1.35	-1.32	
4,728.0	15.70	233.80	4,559.5	-704.1	-952.0	1,184.0	1.56	1.54	
4,820.0	14.90	234.80	4,648.2	-718.2	-971.7	1,208.3	0.92	-0.87	
4,911.0	14.30	235.40	4,736.3	-731.4	-990.5	1,231.2	0.68	-0.66	
5,003.0	15.50	237.70	4,825.2	-744.4	-1,010.2	1,254.8	1.45	1.30	
5,095.0	14.90	234.00	4,914.0	-757.9	-1,030.2	1,278.9	1.24	-0.65	
5,186.0	14.00	234.30	5,002.1	-771.2	-1,048.6	1,301.6	0.99	-0.99	
5,370.0	12.40	236.10	5,181.3	-795.2	-1,083.1	1,343.6	0.90	-0.87	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8506B-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 8506B-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
5,465.0	12.00	237.50	5,274.1	-806.2	-1,099.9	1,363.7	0.52	-0.42	
5,557.0	11.80	233.30	5,364.1	-817.0	-1,115.5	1,382.6	0.97	-0.22	
5,648.0	13.00	231.00	5,453.0	-829.0	-1,130.9	1,402.2	1.43	1.32	
5,740.0	14.80	231.80	5,542.3	-842.7	-1,148.2	1,424.2	1.97	1.96	
5,832.0	13.80	233.60	5,631.5	-856.5	-1,166.2	1,447.0	1.19	-1.09	
5,924.0	14.90	233.70	5,720.6	-870.0	-1,184.6	1,469.8	1.20	1.20	
6,016.0	14.40	232.00	5,809.6	-884.1	-1,203.1	1,493.0	0.72	-0.54	
6,107.0	13.50	231.90	5,897.9	-897.6	-1,220.4	1,515.0	0.99	-0.99	
6,199.0	13.60	230.50	5,987.4	-911.1	-1,237.2	1,536.5	0.37	0.11	
6,291.0	15.00	232.20	6,076.5	-925.3	-1,255.0	1,559.2	1.59	1.52	
6,382.0	14.70	229.10	6,164.5	-940.1	-1,273.0	1,582.5	0.93	-0.33	
6,474.0	14.40	232.00	6,253.5	-954.8	-1,290.8	1,605.5	0.86	-0.33	
6,566.0	12.70	229.10	6,342.9	-968.4	-1,307.5	1,627.1	1.99	-1.85	
6,657.0	14.10	230.00	6,431.5	-982.1	-1,323.5	1,648.1	1.56	1.54	
6,749.0	14.10	232.70	6,520.7	-996.1	-1,341.0	1,670.5	0.71	0.00	
6,840.0	13.30	231.70	6,609.1	-1,009.3	-1,358.1	1,692.0	0.92	-0.88	
6,932.0	13.90	237.10	6,698.5	-1,021.9	-1,375.7	1,713.6	1.53	0.65	
7,023.0	13.50	239.40	6,786.9	-1,033.2	-1,394.0	1,735.1	0.74	-0.44	
7,115.0	13.30	237.60	6,876.4	-1,044.3	-1,412.2	1,756.3	0.50	-0.22	
7,206.0	13.10	236.30	6,965.0	-1,055.7	-1,429.6	1,777.1	0.39	-0.22	
7,297.0	15.20	236.40	7,053.3	-1,068.0	-1,448.1	1,799.3	2.31	2.31	
7,389.0	14.50	235.80	7,142.2	-1,081.1	-1,467.7	1,822.9	0.78	-0.76	
7,481.0	14.40	235.70	7,231.3	-1,094.1	-1,486.6	1,845.8	0.11	-0.11	
7,572.0	13.70	234.80	7,319.6	-1,106.6	-1,504.8	1,867.9	0.81	-0.77	
7,664.0	13.00	234.50	7,409.1	-1,118.9	-1,522.1	1,889.1	0.76	-0.76	
7,756.0	14.30	234.80	7,498.5	-1,131.5	-1,539.8	1,910.9	1.42	1.41	
7,847.0	13.80	235.30	7,586.8	-1,144.2	-1,557.9	1,932.9	0.57	-0.55	
7,939.0	13.10	235.40	7,676.2	-1,156.3	-1,575.5	1,954.3	0.76	-0.76	
8,030.0	12.10	236.30	7,765.0	-1,167.5	-1,592.0	1,974.2	1.12	-1.10	
8,122.0	13.40	234.20	7,854.8	-1,179.1	-1,608.6	1,994.5	1.50	1.41	
8,213.0	13.00	234.50	7,943.4	-1,191.2	-1,625.5	2,015.2	0.45	-0.44	
8,305.0	12.50	235.50	8,033.1	-1,202.8	-1,642.1	2,035.5	0.59	-0.54	
8,397.0	10.80	235.20	8,123.2	-1,213.4	-1,657.4	2,054.1	1.85	-1.85	
8,488.0	8.70	236.70	8,212.9	-1,222.0	-1,670.2	2,069.5	2.32	-2.31	
8,579.0	6.80	234.30	8,303.0	-1,228.9	-1,680.3	2,081.8	2.12	-2.09	
8,670.0	5.00	240.20	8,393.6	-1,234.1	-1,688.1	2,091.1	2.08	-1.98	
8,762.0	2.90	245.80	8,485.3	-1,237.0	-1,693.7	2,097.4	2.32	-2.28	
8,854.0	1.30	247.80	8,577.3	-1,238.4	-1,696.8	2,100.6	1.74	-1.74	
8,939.0	0.70	346.10	8,662.3	-1,238.2	-1,697.8	2,101.4	1.84	-0.71	
9,032.0	0.80	2.40	8,755.3	-1,237.0	-1,697.9	2,100.8	0.25	0.11	
9,123.0	1.50	25.10	8,846.2	-1,235.3	-1,697.4	2,099.3	0.90	0.77	
9,215.0	1.00	21.20	8,938.2	-1,233.5	-1,696.6	2,097.6	0.55	-0.54	
9,306.0	1.10	5.30	9,029.2	-1,231.9	-1,696.2	2,096.3	0.34	0.11	
9,398.0	1.20	72.90	9,121.2	-1,230.7	-1,695.2	2,094.8	1.39	0.11	
9,490.0	0.80	84.80	9,213.2	-1,230.3	-1,693.7	2,093.4	0.49	-0.43	
9,581.0	0.80	83.20	9,304.2	-1,230.2	-1,692.4	2,092.3	0.02	0.00	
9,673.0	0.50	115.10	9,396.2	-1,230.3	-1,691.4	2,091.5	0.50	-0.33	
9,764.0	1.70	74.10	9,487.1	-1,230.1	-1,689.8	2,090.1	1.50	1.32	
9,866.0	1.30	82.30	9,589.1	-1,229.5	-1,687.2	2,087.6	0.44	-0.39	
9,958.0	1.20	105.40	9,681.1	-1,229.7	-1,685.2	2,086.1	0.55	-0.11	
10,049.0	1.20	131.40	9,772.1	-1,230.5	-1,683.6	2,085.3	0.59	0.00	
10,141.0	1.40	162.00	9,864.0	-1,232.2	-1,682.5	2,085.5	0.77	0.22	
10,232.0	1.10	105.20	9,955.0	-1,233.5	-1,681.3	2,085.3	1.34	-0.33	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8506B-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 8506B-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
10,324.0	1.30	45.60	10,047.0	-1,233.0	-1,679.7	2,083.7	1.31	0.22	
10,416.0	0.50	42.10	10,139.0	-1,232.0	-1,678.7	2,082.3	0.87	-0.87	
10,507.0	0.30	164.50	10,230.0	-1,231.9	-1,678.4	2,082.0	0.78	-0.22	
10,599.0	0.70	198.90	10,322.0	-1,232.7	-1,678.5	2,082.5	0.53	0.43	
10,690.0	0.20	154.60	10,413.0	-1,233.4	-1,678.6	2,083.0	0.63	-0.55	
10,782.0	0.80	4.80	10,505.0	-1,232.9	-1,678.5	2,082.6	1.06	0.65	
10,874.0	0.30	270.30	10,597.0	-1,232.2	-1,678.7	2,082.4	0.95	-0.54	
10,965.0	0.70	228.10	10,688.0	-1,232.6	-1,679.3	2,083.1	0.57	0.44	
11,057.0	0.20	110.40	10,780.0	-1,233.0	-1,679.6	2,083.6	0.88	-0.54	
11,149.0	0.70	216.50	10,872.0	-1,233.5	-1,679.8	2,084.0	0.85	0.54	
11,240.0	1.20	212.30	10,963.0	-1,234.8	-1,680.6	2,085.5	0.55	0.55	
11,332.0	0.30	328.10	11,054.9	-1,235.4	-1,681.2	2,086.3	1.48	-0.98	
11,423.0	0.50	253.10	11,145.9	-1,235.3	-1,681.8	2,086.7	0.56	0.22	
11,515.0	0.70	228.20	11,237.9	-1,235.8	-1,682.6	2,087.6	0.35	0.22	
11,606.0	1.00	216.50	11,328.9	-1,236.8	-1,683.4	2,088.9	0.38	0.33	
11,698.0	0.60	241.50	11,420.9	-1,237.7	-1,684.3	2,090.2	0.57	-0.43	
11,789.0	0.80	218.60	11,511.9	-1,238.4	-1,685.2	2,091.3	0.37	0.22	
11,881.0	1.30	212.50	11,603.9	-1,239.8	-1,686.1	2,092.9	0.56	0.54	
11,973.0	1.70	218.10	11,695.9	-1,241.8	-1,687.5	2,095.2	0.46	0.43	
12,064.0	2.20	220.20	11,786.8	-1,244.1	-1,689.5	2,098.1	0.55	0.55	
12,156.0	2.80	233.30	11,878.7	-1,246.8	-1,692.4	2,102.1	0.90	0.65	
12,247.0	3.10	236.20	11,969.6	-1,249.5	-1,696.2	2,106.8	0.37	0.33	
12,302.0	3.00	233.80	12,024.5	-1,251.2	-1,698.6	2,109.7	0.29	-0.18	Last Cathedral Survey @ 12,302' MD Projection to Bit @ 12,357'
12,357.0	3.00	233.80	12,079.5	-1,252.9	-1,701.0	2,112.6	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
8506B-36 PBHL	0.00	0.00	11,893.0	-1,241.4	-1,693.6	1,676,101.57	2,262,592.33	39° 39' 37.80 N	108° 7' 10.43 W
- survey misses target center by 5.9ft at 12170.1ft MD (11892.9 TVD, -1247.3 N, -1693.0 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
8506B-36 TGT	0.00	0.00	8,500.0	-1,231.4	-1,676.6	1,676,111.10	2,262,609.60	39° 39' 37.90 N	108° 7' 10.21 W
- survey misses target center by 18.7ft at 8776.0ft MD (8499.3 TVD, -1237.3 N, -1694.4 E)									
- Point									

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
12,302.0	12,024.5	-1,251.2	-1,698.6	Last Cathedral Survey @ 12,302' MD	
12,357.0	12,079.5	-1,252.9	-1,701.0	Projection to Bit @ 12,357'	

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------