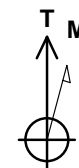
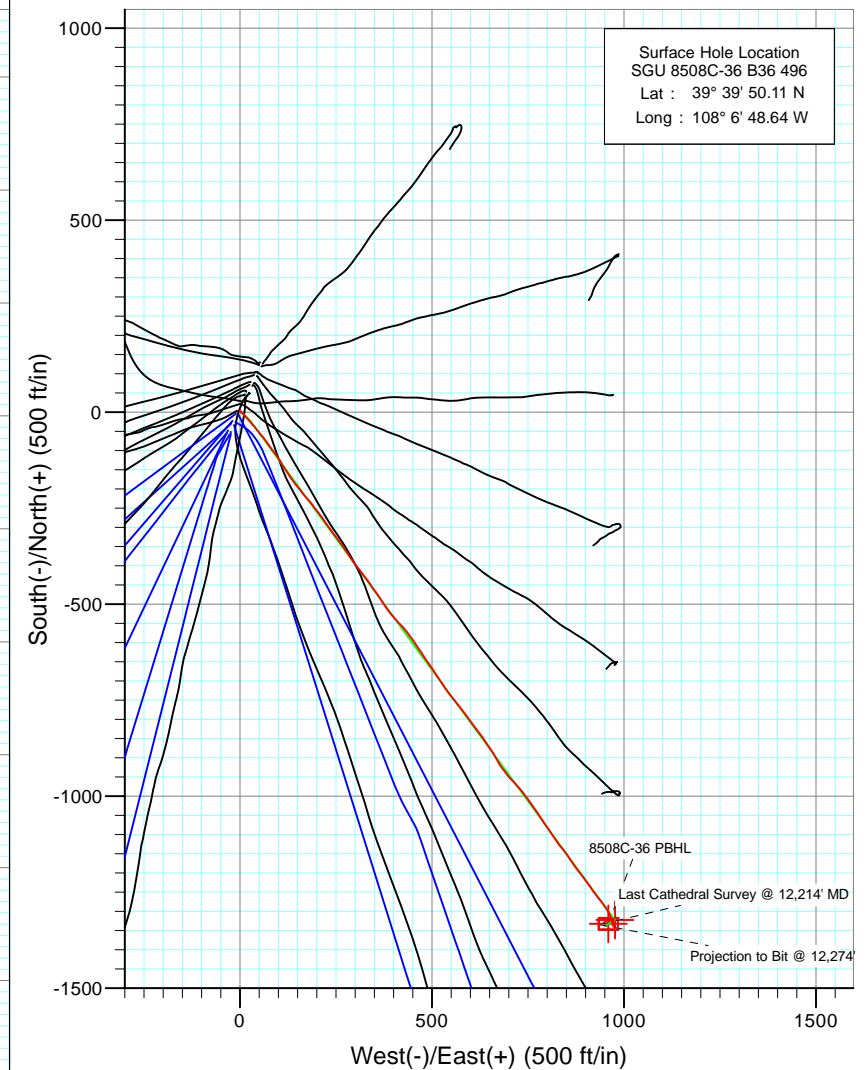
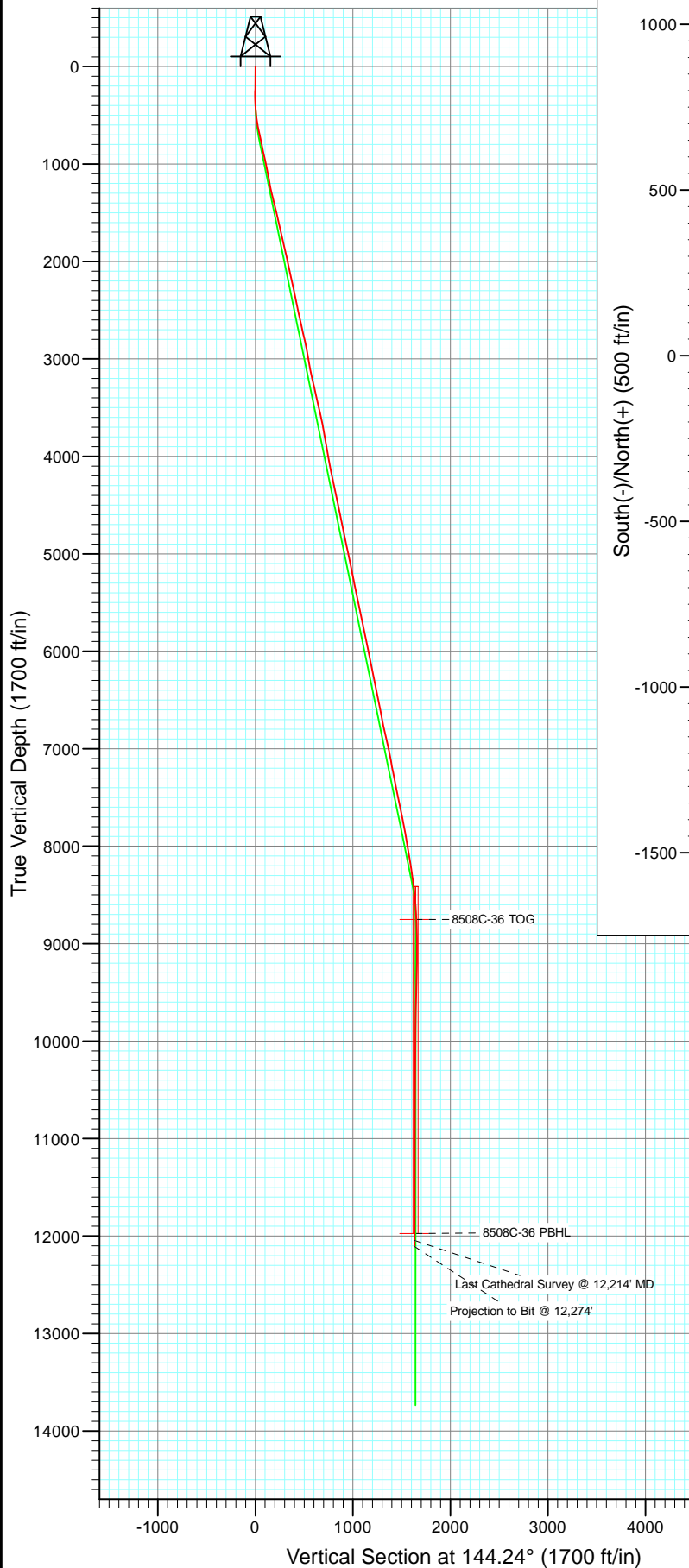




Project: Story Gulch
 Site: S36-T4S-R96W (B36 496)
 Well: SGU 8508C-36 B36 496
 Wellbore: DD
 Design: FINAL



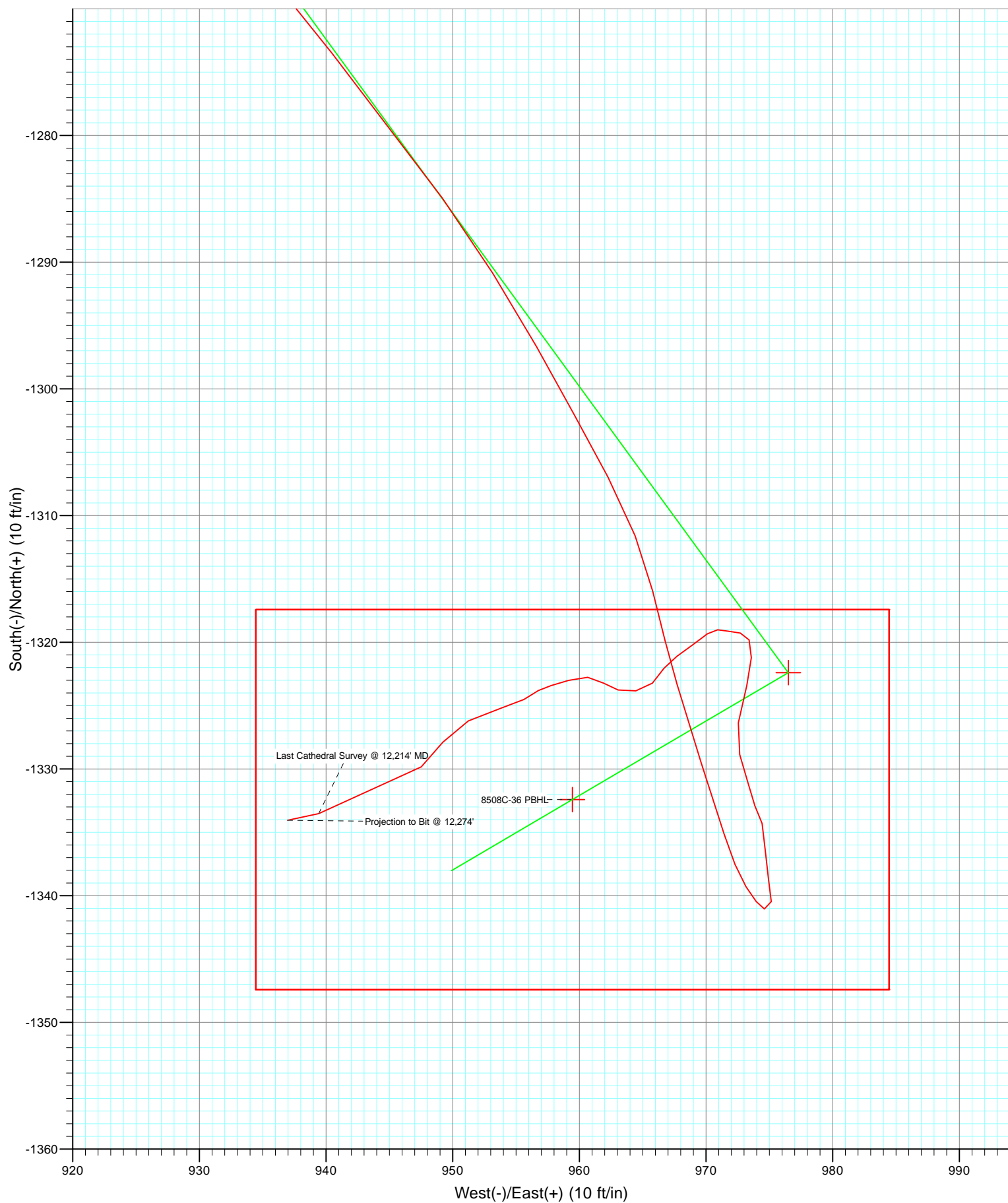
Azimuths to True North
 Magnetic North: 10.46°

Magnetic Field
 Strength: 52335.4snT
 Dip Angle: 65.86°
 Date: 3/4/2011
 Model: IGRF2010

DD SGU 8508C-36 B36 496 105484, 115112; LR						
KBE @ 8374.0ft (Patterson 308) North American Datum 1983 Well SGU 8508C-36 B36 496, True North						
Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
Target	8508C-36 PBHL	144.24	Slot	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
8508C-36 PBHL	8750.0 11974.0	-1332.4	959.5	39° 39' 36.94 N	108° 6' 36.37 W	



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



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8508C-36 B36 496
Project:	Story Gulch	TVD Reference:	KBE @ 8374.0ft (Patterson 308)
Site:	S36-T4S-R96W (B36 496)	MD Reference:	KBE @ 8374.0ft (Patterson 308)
Well:	SGU 8508C-36 B36 496	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 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 8508C-36 B36 496					
Well Position	+N/-S	0.0 ft	Northing:	1,677,297.39 ft	Latitude:	39° 39' 50.11 N
	+E/-W	0.0 ft	Easting:	2,264,331.69 ft	Longitude:	108° 6' 48.64 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	3/4/2011	10.46	65.86	52,335

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	144.24	

Survey Program	Date	3/18/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
200.0	12,274.0	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	1.00	356.10	200.0	1.7	-0.1	-1.5	0.50	0.50		
230.0	0.70	9.60	230.0	2.2	-0.1	-1.8	1.20	-1.00		
261.0	0.70	35.30	261.0	2.5	0.0	-2.0	1.00	0.00		
292.0	0.70	44.70	292.0	2.8	0.3	-2.1	0.37	0.00		
322.0	0.80	65.30	322.0	3.0	0.6	-2.1	0.95	0.33		
352.0	1.20	114.50	352.0	3.0	1.1	-1.8	3.03	1.33		
383.0	2.20	124.20	383.0	2.5	1.9	-1.0	3.35	3.23		
414.0	3.20	129.30	413.9	1.6	3.0	0.4	3.31	3.23		
445.0	4.50	135.50	444.9	0.2	4.5	2.5	4.40	4.19		
475.0	5.50	136.80	474.7	-1.7	6.4	5.1	3.35	3.33		
506.0	6.60	139.80	505.6	-4.1	8.5	8.3	3.69	3.55		
538.0	7.90	139.70	537.3	-7.2	11.1	12.3	4.06	4.06		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8508C-36 B36 496
Project:	Story Gulch	TVD Reference:	KBE @ 8374.0ft (Patterson 308)
Site:	S36-T4S-R96W (B36 496)	MD Reference:	KBE @ 8374.0ft (Patterson 308)
Well:	SGU 8508C-36 B36 496	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 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	9.00	139.20	568.0	-10.7	14.1	16.9	3.56	3.55	
601.0	10.20	137.90	599.5	-14.6	17.6	22.2	3.81	3.75	
696.0	12.60	139.30	692.6	-28.7	30.0	40.9	2.54	2.53	
791.0	12.30	140.50	785.4	-44.4	43.2	61.3	0.42	-0.32	
886.0	11.70	139.30	878.3	-59.5	55.9	81.0	0.68	-0.63	
981.0	12.50	145.30	971.2	-75.3	68.1	100.9	1.57	0.84	
1,076.0	11.30	144.40	1,064.2	-91.3	79.3	120.5	1.28	-1.26	
1,171.0	9.90	141.00	1,157.6	-105.2	89.9	137.9	1.61	-1.47	
1,266.0	11.90	147.80	1,250.8	-119.9	100.3	155.8	2.50	2.11	
1,361.0	13.90	148.20	1,343.4	-137.8	111.5	177.0	2.11	2.11	
1,456.0	14.10	147.40	1,435.6	-157.3	123.7	199.9	0.29	0.21	
1,551.0	13.10	144.30	1,528.0	-175.8	136.3	222.3	1.30	-1.05	
1,646.0	13.30	143.00	1,620.4	-193.2	149.1	244.0	0.38	0.21	
1,741.0	12.20	139.00	1,713.1	-209.6	162.3	264.9	1.48	-1.16	
1,836.0	12.80	139.40	1,805.9	-225.1	175.7	285.4	0.64	0.63	
1,931.0	13.50	143.10	1,898.4	-242.0	189.2	306.9	1.15	0.74	
2,027.0	12.10	142.00	1,992.0	-258.9	202.1	328.2	1.48	-1.46	
2,122.0	11.90	143.80	2,084.9	-274.6	214.1	347.9	0.45	-0.21	
2,217.0	12.60	145.20	2,177.7	-291.0	225.8	368.1	0.80	0.74	
2,312.0	12.70	144.10	2,270.4	-308.0	237.8	388.9	0.27	0.11	
2,407.0	11.10	142.30	2,363.4	-323.7	249.5	408.5	1.73	-1.68	
2,503.0	11.70	143.70	2,457.5	-338.8	260.9	427.4	0.69	0.62	
2,598.0	13.00	146.30	2,550.3	-355.5	272.6	447.8	1.49	1.37	
2,693.0	12.20	146.00	2,643.0	-372.7	284.1	468.5	0.84	-0.84	
2,788.0	12.90	144.30	2,735.7	-389.6	295.9	489.1	0.83	0.74	
2,884.0	12.00	142.60	2,829.5	-406.3	308.2	509.8	1.01	-0.94	
2,980.0	11.00	142.00	2,923.5	-421.4	319.9	528.9	1.05	-1.04	
3,080.0	9.80	142.70	3,021.9	-435.7	330.9	547.0	1.21	-1.20	
3,171.0	10.40	147.00	3,111.5	-448.8	340.1	562.9	1.06	0.66	
3,263.0	13.60	143.60	3,201.5	-464.4	351.1	582.0	3.56	3.48	
3,355.0	12.70	146.20	3,291.1	-481.5	363.1	603.0	1.17	-0.98	
3,446.0	12.30	147.80	3,379.9	-498.1	373.8	622.6	0.58	-0.44	
3,538.0	12.90	144.10	3,469.7	-514.7	385.1	642.7	1.09	0.65	
3,630.0	13.10	138.50	3,559.3	-530.8	398.0	663.3	1.39	0.22	
3,721.0	11.90	138.10	3,648.2	-545.5	411.1	682.9	1.32	-1.32	
3,813.0	10.20	135.70	3,738.5	-558.4	423.1	700.4	1.91	-1.85	
3,904.0	9.70	141.90	3,828.1	-570.2	433.5	716.0	1.30	-0.55	
3,996.0	9.60	142.30	3,918.8	-582.4	443.0	731.4	0.13	-0.11	
4,087.0	10.10	147.00	4,008.5	-595.1	451.9	747.0	1.04	0.55	
4,179.0	11.00	145.30	4,098.9	-609.0	461.3	763.8	1.04	0.98	
4,271.0	12.50	147.50	4,189.0	-624.7	471.7	782.5	1.70	1.63	
4,362.0	12.40	145.90	4,277.8	-641.1	482.5	802.1	0.39	-0.11	
4,454.0	11.50	144.90	4,367.8	-656.7	493.3	821.2	1.00	-0.98	
4,545.0	11.70	146.00	4,457.0	-671.8	503.6	839.5	0.33	0.22	
4,637.0	11.40	145.70	4,547.1	-687.1	514.0	857.9	0.33	-0.33	
4,728.0	12.20	147.20	4,636.2	-702.6	524.3	876.5	0.94	0.88	
4,820.0	11.40	147.30	4,726.2	-718.4	534.4	895.3	0.87	-0.87	
4,911.0	12.00	141.70	4,815.4	-733.4	545.2	913.7	1.41	0.66	
5,003.0	11.30	140.50	4,905.5	-747.8	556.8	932.3	0.81	-0.76	
5,095.0	11.80	143.20	4,995.6	-762.3	568.2	950.7	0.80	0.54	
5,186.0	11.40	140.00	5,084.7	-776.7	579.5	968.9	0.83	-0.44	
5,278.0	12.40	143.70	5,174.8	-791.6	591.2	987.9	1.37	1.09	
5,370.0	11.00	145.20	5,264.9	-806.8	602.1	1,006.5	1.56	-1.52	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8508C-36 B36 496
Project:	Story Gulch	TVD Reference:	KBE @ 8374.0ft (Patterson 308)
Site:	S36-T4S-R96W (B36 496)	MD Reference:	KBE @ 8374.0ft (Patterson 308)
Well:	SGU 8508C-36 B36 496	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 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
5,461.0	12.40	142.70	5,354.0	-821.7	613.0	1,025.0	1.64	1.54	
5,553.0	11.60	140.80	5,444.0	-836.7	624.8	1,044.1	0.97	-0.87	
5,645.0	12.10	147.70	5,534.0	-852.0	635.8	1,062.9	1.63	0.54	
5,737.0	11.40	144.90	5,624.1	-867.6	646.2	1,081.7	0.98	-0.76	
5,829.0	12.00	147.50	5,714.2	-883.1	656.5	1,100.3	0.87	0.65	
5,920.0	10.90	151.50	5,803.3	-898.6	665.7	1,118.3	1.49	-1.21	
6,012.0	12.00	149.40	5,893.5	-914.5	674.8	1,136.4	1.28	1.20	
6,104.0	11.30	143.30	5,983.6	-930.0	685.0	1,155.0	1.54	-0.76	
6,196.0	11.30	141.40	6,073.8	-944.3	696.0	1,173.0	0.40	0.00	
6,287.0	12.50	135.20	6,162.9	-958.2	708.5	1,191.6	1.93	1.32	
6,379.0	11.30	137.50	6,252.9	-971.9	721.6	1,210.4	1.40	-1.30	
6,470.0	11.80	142.50	6,342.1	-985.9	733.3	1,228.6	1.23	0.55	
6,562.0	10.90	142.40	6,432.3	-1,000.2	744.4	1,246.7	0.98	-0.98	
6,654.0	11.70	145.60	6,522.5	-1,014.8	754.9	1,264.7	1.10	0.87	
6,745.0	10.70	142.50	6,611.7	-1,029.1	765.3	1,282.3	1.28	-1.10	
6,837.0	10.90	147.30	6,702.1	-1,043.2	775.2	1,299.6	1.00	0.22	
6,928.0	12.90	146.40	6,791.2	-1,058.9	785.5	1,318.3	2.21	2.20	
7,020.0	12.70	145.60	6,880.9	-1,075.8	796.9	1,338.7	0.29	-0.22	
7,112.0	12.10	146.70	6,970.7	-1,092.2	807.9	1,358.4	0.70	-0.65	
7,203.0	11.30	144.00	7,059.8	-1,107.4	818.3	1,376.9	1.07	-0.88	
7,294.0	10.10	147.30	7,149.3	-1,121.4	827.9	1,393.8	1.48	-1.32	
7,386.0	11.50	138.60	7,239.6	-1,135.0	838.3	1,410.9	2.33	1.52	
7,477.0	11.50	144.60	7,328.8	-1,149.2	849.6	1,429.0	1.31	0.00	
7,569.0	11.30	148.30	7,419.0	-1,164.4	859.6	1,447.2	0.82	-0.22	
7,661.0	12.10	143.00	7,509.1	-1,179.7	870.2	1,465.8	1.46	0.87	
7,752.0	11.30	141.20	7,598.2	-1,194.3	881.5	1,484.3	0.97	-0.88	
7,844.0	11.40	143.40	7,688.4	-1,208.6	892.6	1,502.4	0.48	0.11	
7,935.0	10.70	144.30	7,777.7	-1,222.7	902.8	1,519.8	0.79	-0.77	
8,027.0	10.40	145.40	7,868.1	-1,236.5	912.5	1,536.6	0.39	-0.33	
8,118.0	10.00	144.00	7,957.7	-1,249.6	921.9	1,552.8	0.52	-0.44	
8,210.0	9.40	141.70	8,048.4	-1,262.0	931.2	1,568.3	0.78	-0.65	
8,302.0	9.10	140.60	8,139.2	-1,273.5	940.5	1,583.0	0.38	-0.33	
8,393.0	9.10	144.80	8,229.1	-1,284.9	949.2	1,597.4	0.73	0.00	
8,485.0	8.30	150.70	8,320.0	-1,296.7	956.6	1,611.3	1.30	-0.87	
8,575.0	6.70	152.10	8,409.2	-1,307.0	962.3	1,622.9	1.79	-1.78	
8,667.0	5.40	166.50	8,500.7	-1,315.9	965.8	1,632.3	2.16	-1.41	
8,757.0	4.30	163.90	8,590.4	-1,323.3	967.7	1,639.3	1.25	-1.22	
8,849.0	3.80	161.80	8,682.2	-1,329.5	969.6	1,645.5	0.57	-0.54	
8,940.0	3.60	162.60	8,773.0	-1,335.1	971.4	1,651.1	0.23	-0.22	
9,032.0	2.10	148.60	8,864.9	-1,339.3	973.2	1,655.5	1.79	-1.63	
9,124.0	0.80	118.20	8,956.8	-1,341.0	974.6	1,657.8	1.59	-1.41	
9,215.0	1.10	359.00	9,047.8	-1,340.5	975.2	1,657.6	1.81	0.33	
9,307.0	1.10	347.50	9,139.8	-1,338.7	974.9	1,656.1	0.24	0.00	
9,399.0	1.70	357.50	9,231.8	-1,336.5	974.7	1,654.1	0.70	0.65	
9,490.0	1.10	346.60	9,322.7	-1,334.3	974.4	1,652.2	0.72	-0.66	
9,582.0	0.80	324.70	9,414.7	-1,332.9	973.9	1,650.7	0.51	-0.33	
9,673.0	1.70	352.10	9,505.7	-1,331.1	973.3	1,648.9	1.16	0.99	
9,765.0	1.20	332.00	9,597.7	-1,328.9	972.7	1,646.7	0.77	-0.54	
9,857.0	2.10	11.50	9,689.6	-1,326.4	972.6	1,644.6	1.52	0.98	
9,948.0	1.70	14.60	9,780.6	-1,323.4	973.2	1,642.7	0.45	-0.44	
10,040.0	1.10	1.00	9,872.6	-1,321.2	973.6	1,641.1	0.74	-0.65	
10,131.0	0.70	339.10	9,963.6	-1,319.8	973.4	1,639.8	0.57	-0.44	
10,223.0	0.60	271.90	10,055.6	-1,319.3	972.7	1,639.0	0.79	-0.11	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well SGU 8508C-36 B36 496
Project:	Story Gulch	TVD Reference:	KBE @ 8374.0ft (Patterson 308)
Site:	S36-T4S-R96W (B36 496)	MD Reference:	KBE @ 8374.0ft (Patterson 308)
Well:	SGU 8508C-36 B36 496	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 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
10,315.0	0.70	285.40	10,147.5	-1,319.1	971.7	1,638.3	0.20	0.11	
10,406.0	0.30	259.00	10,238.5	-1,319.0	970.9	1,637.7	0.50	-0.44	
10,498.0	0.80	244.40	10,330.5	-1,319.3	970.1	1,637.5	0.56	0.54	
10,589.0	1.10	224.80	10,421.5	-1,320.2	968.9	1,637.6	0.48	0.33	
10,681.0	0.80	246.80	10,513.5	-1,321.1	967.7	1,637.6	0.51	-0.33	
10,773.0	1.00	211.60	10,605.5	-1,322.0	966.7	1,637.7	0.63	0.22	
10,864.0	0.90	225.30	10,696.5	-1,323.2	965.8	1,638.1	0.27	-0.11	
10,956.0	1.00	262.50	10,788.5	-1,323.8	964.5	1,637.9	0.67	0.11	
11,047.0	0.80	286.40	10,879.5	-1,323.8	963.1	1,637.0	0.46	-0.22	
11,139.0	0.80	303.70	10,971.5	-1,323.2	961.9	1,635.9	0.26	0.00	
11,231.0	0.90	278.10	11,063.5	-1,322.8	960.7	1,634.8	0.42	0.11	
11,322.0	1.10	247.10	11,154.4	-1,323.0	959.2	1,634.1	0.62	0.22	
11,414.0	0.70	263.50	11,246.4	-1,323.4	957.8	1,633.6	0.51	-0.43	
11,506.0	0.70	233.60	11,338.4	-1,323.8	956.8	1,633.4	0.39	0.00	
11,597.0	1.00	241.50	11,429.4	-1,324.5	955.6	1,633.3	0.35	0.33	
11,688.0	1.50	254.50	11,520.4	-1,325.2	953.8	1,632.8	0.63	0.55	
11,780.0	1.90	244.10	11,612.3	-1,326.2	951.2	1,632.1	0.55	0.43	
11,872.0	1.50	212.30	11,704.3	-1,327.9	949.2	1,632.3	1.10	-0.43	
11,963.0	1.80	228.60	11,795.3	-1,329.8	947.5	1,632.9	0.61	0.33	
12,214.0	2.40	258.10	12,046.1	-1,333.5	939.4	1,631.1	0.48	0.24	Last Cathedral Survey @ 12,214' MD Projection to Bit @ 12,274'
12,274.0	2.40	258.10	12,106.1	-1,334.0	937.0	1,630.1	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
8508C-36 TOG - hit/miss target - Shape	0.00	0.00	8,750.0	-1,322.4	976.5	1,675,947.45	2,265,269.75	39° 39' 37.04 N	108° 6' 36.15 W
- actual wellpath misses target center by 12.6ft at 8916.4ft MD (8749.4 TVD, -1333.7 N, 971.0 E)									
- Point									
8508C-36 PBHL - actual wellpath misses target center by 17.2ft at 12141.3ft MD (11973.4 TVD, -1332.8 N, 942.2 E)	0.00	0.00	11,974.0	-1,332.4	959.5	1,675,937.93	2,265,252.42	39° 39' 36.94 N	108° 6' 36.37 W
- Rectangle (sides W30.0 H50.0 D0.0)									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
12,214.0	12,046.1	-1,333.5	939.4	Last Cathedral Survey @ 12,214' MD	
12,274.0	12,106.1	-1,334.0	937.0	Projection to Bit @ 12,274'	

Checked By: _____ Approved By: _____ Date: _____