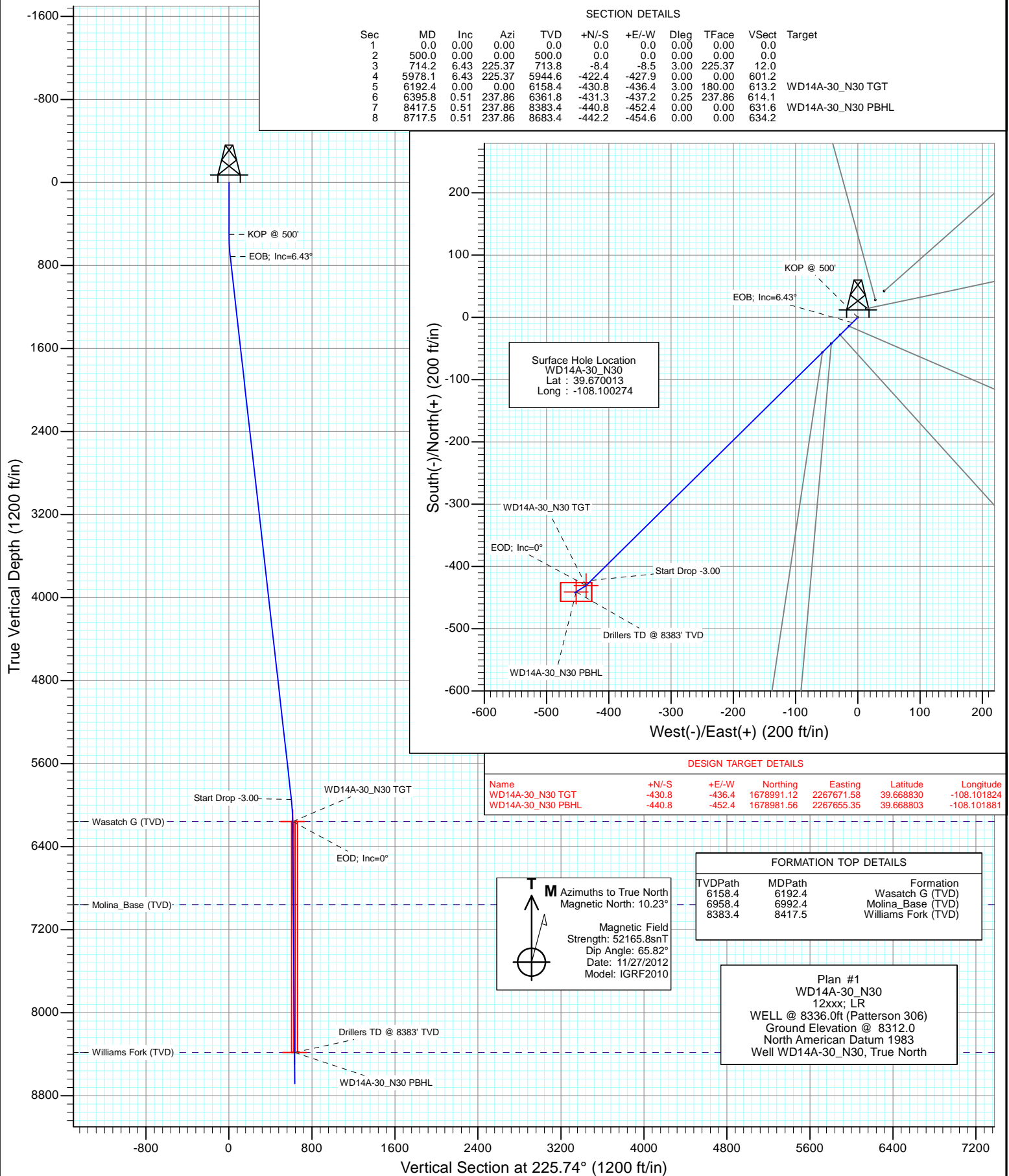


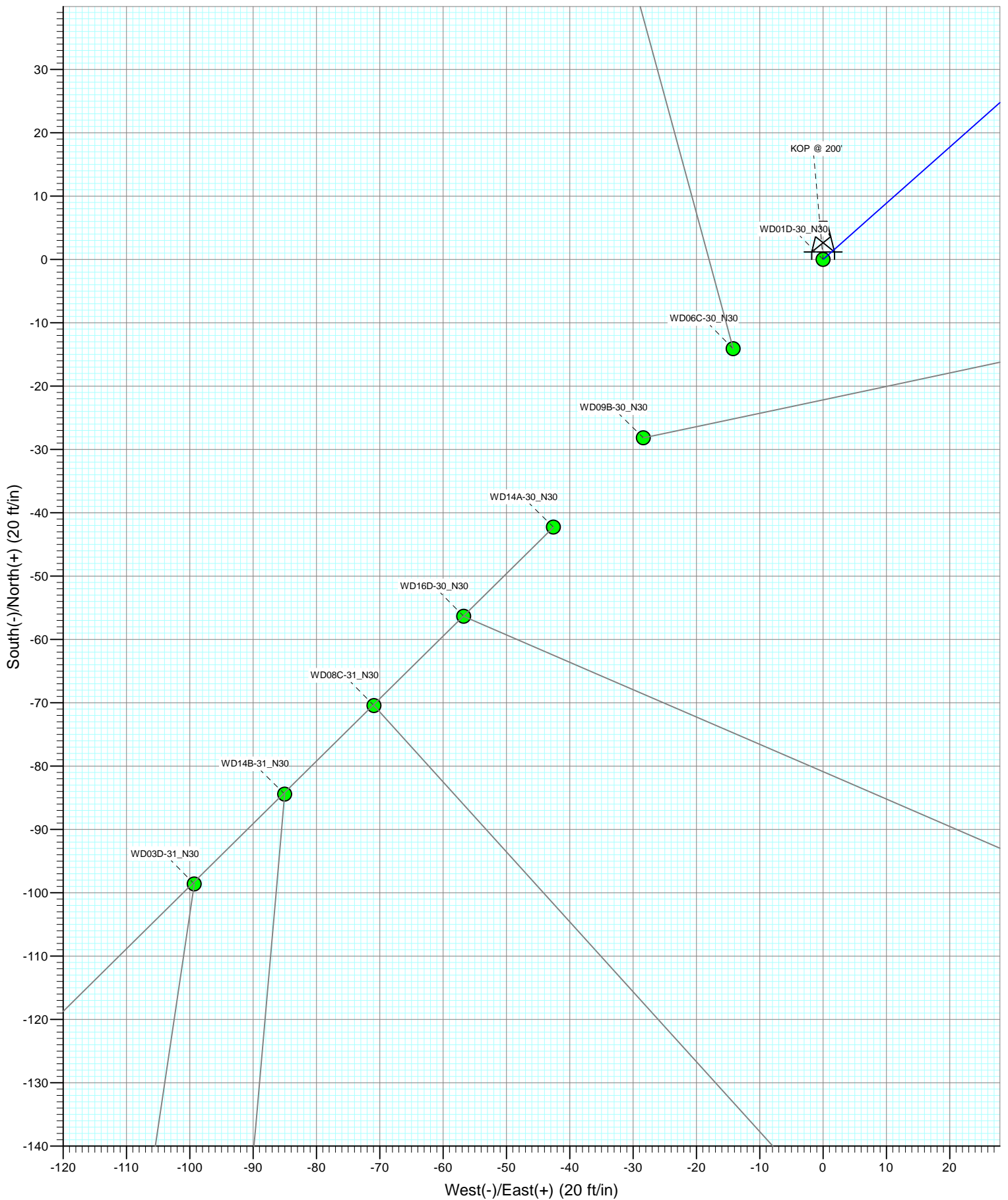


Project: Story Gulch
Site: N30 495
Well: WD14A-30_N30
Wellbore: DD
Design: Plan #1





Project: Story Gulch
Site: N30 495
Well: WD01D-30_N30
Wellbore: DD
Design: Plan #1



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WD14A-30_N30
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 8336.0ft (Patterson 306)
Project:	Story Gulch	MD Reference:	WELL @ 8336.0ft (Patterson 306)
Site:	N30 495	North Reference:	True
Well:	WD14A-30_N30	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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		N30 495			
Site Position:		Northing:	1,679,450.30 ft	Latitude:	39.670129
From:	Lat/Long	Easting:	2,268,163.89 ft	Longitude:	-108.100123
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.64 °

Well	WD14A-30_N30					
Well Position	+N/-S	0.0 ft	Northing:	1,679,409.26 ft	Latitude:	39.670013
	+E/-W	0.0 ft	Easting:	2,268,120.13 ft	Longitude:	-108.100274
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,312.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/27/2012	10.23	65.82	52,166

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	225.74

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
714.2	6.43	225.37	713.8	-8.4	-8.5	3.00	3.00	0.00	225.37	
5,978.1	6.43	225.37	5,944.6	-422.4	-427.9	0.00	0.00	0.00	0.00	
6,192.4	0.00	0.00	6,158.4	-430.8	-436.4	3.00	-3.00	0.00	180.00	WD14A-30_N30 TGT
6,395.8	0.51	237.86	6,361.8	-431.3	-437.2	0.25	0.25	-60.05	237.86	
8,417.5	0.51	237.86	8,383.4	-440.8	-452.4	0.00	0.00	0.00	0.00	WD14A-30_N30 PBH
8,717.5	0.51	237.86	8,683.4	-442.2	-454.6	0.00	0.00	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WD14A-30_N30
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 8336.0ft (Patterson 306)
Project:	Story Gulch	MD Reference:	WELL @ 8336.0ft (Patterson 306)
Site:	N30 495	North Reference:	True
Well:	WD14A-30_N30	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500'
600.0	3.00	225.37	600.0	-1.8	-1.9	2.6	3.00	3.00	
700.0	6.00	225.37	699.6	-7.4	-7.4	10.5	3.00	3.00	
714.2	6.43	225.37	713.8	-8.4	-8.5	12.0	3.00	3.00	EOB; Inc=6.43°
800.0	6.43	225.37	799.0	-15.2	-15.4	21.6	0.00	0.00	
900.0	6.43	225.37	898.4	-23.0	-23.3	32.8	0.00	0.00	
1,000.0	6.43	225.37	997.8	-30.9	-31.3	44.0	0.00	0.00	
1,100.0	6.43	225.37	1,097.1	-38.8	-39.3	55.2	0.00	0.00	
1,200.0	6.43	225.37	1,196.5	-46.6	-47.2	66.4	0.00	0.00	
1,300.0	6.43	225.37	1,295.9	-54.5	-55.2	77.6	0.00	0.00	
1,400.0	6.43	225.37	1,395.2	-62.4	-63.2	88.8	0.00	0.00	
1,500.0	6.43	225.37	1,494.6	-70.2	-71.1	100.0	0.00	0.00	
1,600.0	6.43	225.37	1,594.0	-78.1	-79.1	111.1	0.00	0.00	
1,700.0	6.43	225.37	1,693.4	-85.9	-87.1	122.3	0.00	0.00	
1,800.0	6.43	225.37	1,792.7	-93.8	-95.0	133.5	0.00	0.00	
1,900.0	6.43	225.37	1,892.1	-101.7	-103.0	144.7	0.00	0.00	
2,000.0	6.43	225.37	1,991.5	-109.5	-111.0	155.9	0.00	0.00	
2,100.0	6.43	225.37	2,090.8	-117.4	-118.9	167.1	0.00	0.00	
2,200.0	6.43	225.37	2,190.2	-125.3	-126.9	178.3	0.00	0.00	
2,300.0	6.43	225.37	2,289.6	-133.1	-134.9	189.5	0.00	0.00	
2,400.0	6.43	225.37	2,389.0	-141.0	-142.8	200.7	0.00	0.00	
2,500.0	6.43	225.37	2,488.3	-148.9	-150.8	211.9	0.00	0.00	
2,600.0	6.43	225.37	2,587.7	-156.7	-158.8	223.1	0.00	0.00	
2,700.0	6.43	225.37	2,687.1	-164.6	-166.7	234.3	0.00	0.00	
2,800.0	6.43	225.37	2,786.4	-172.4	-174.7	245.5	0.00	0.00	
2,900.0	6.43	225.37	2,885.8	-180.3	-182.7	256.7	0.00	0.00	
3,000.0	6.43	225.37	2,985.2	-188.2	-190.6	267.9	0.00	0.00	
3,100.0	6.43	225.37	3,084.6	-196.0	-198.6	279.0	0.00	0.00	
3,200.0	6.43	225.37	3,183.9	-203.9	-206.6	290.2	0.00	0.00	
3,300.0	6.43	225.37	3,283.3	-211.8	-214.5	301.4	0.00	0.00	
3,400.0	6.43	225.37	3,382.7	-219.6	-222.5	312.6	0.00	0.00	
3,500.0	6.43	225.37	3,482.0	-227.5	-230.5	323.8	0.00	0.00	
3,600.0	6.43	225.37	3,581.4	-235.4	-238.4	335.0	0.00	0.00	
3,700.0	6.43	225.37	3,680.8	-243.2	-246.4	346.2	0.00	0.00	
3,800.0	6.43	225.37	3,780.2	-251.1	-254.4	357.4	0.00	0.00	
3,900.0	6.43	225.37	3,879.5	-259.0	-262.3	368.6	0.00	0.00	
4,000.0	6.43	225.37	3,978.9	-266.8	-270.3	379.8	0.00	0.00	
4,100.0	6.43	225.37	4,078.3	-274.7	-278.2	391.0	0.00	0.00	
4,200.0	6.43	225.37	4,177.6	-282.5	-286.2	402.2	0.00	0.00	
4,300.0	6.43	225.37	4,277.0	-290.4	-294.2	413.4	0.00	0.00	
4,400.0	6.43	225.37	4,376.4	-298.3	-302.1	424.6	0.00	0.00	
4,500.0	6.43	225.37	4,475.8	-306.1	-310.1	435.8	0.00	0.00	
4,600.0	6.43	225.37	4,575.1	-314.0	-318.1	446.9	0.00	0.00	
4,700.0	6.43	225.37	4,674.5	-321.9	-326.0	458.1	0.00	0.00	
4,800.0	6.43	225.37	4,773.9	-329.7	-334.0	469.3	0.00	0.00	
4,900.0	6.43	225.37	4,873.2	-337.6	-342.0	480.5	0.00	0.00	
5,000.0	6.43	225.37	4,972.6	-345.5	-349.9	491.7	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WD14A-30_N30
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 8336.0ft (Patterson 306)
Project:	Story Gulch	MD Reference:	WELL @ 8336.0ft (Patterson 306)
Site:	N30 495	North Reference:	True
Well:	WD14A-30_N30	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
5,100.0	6.43	225.37	5,072.0	-353.3	-357.9	502.9	0.00	0.00	
5,200.0	6.43	225.37	5,171.4	-361.2	-365.9	514.1	0.00	0.00	
5,300.0	6.43	225.37	5,270.7	-369.0	-373.8	525.3	0.00	0.00	
5,400.0	6.43	225.37	5,370.1	-376.9	-381.8	536.5	0.00	0.00	
5,500.0	6.43	225.37	5,469.5	-384.8	-389.8	547.7	0.00	0.00	
5,600.0	6.43	225.37	5,568.8	-392.6	-397.7	558.9	0.00	0.00	
5,700.0	6.43	225.37	5,668.2	-400.5	-405.7	570.1	0.00	0.00	
5,800.0	6.43	225.37	5,767.6	-408.4	-413.7	581.3	0.00	0.00	
5,900.0	6.43	225.37	5,867.0	-416.2	-421.6	592.5	0.00	0.00	
5,978.1	6.43	225.37	5,944.6	-422.4	-427.9	601.2	0.00	0.00	Start Drop -3.00
6,000.0	5.77	225.37	5,966.3	-424.0	-429.5	603.5	3.00	-3.00	
6,100.0	2.77	225.37	6,066.1	-429.2	-434.8	611.0	3.00	-3.00	
6,192.4	0.00	0.00	6,158.4	-430.8	-436.4	613.2	3.00	-3.00	EOD; Inc=0° - Wasatch G (TVD) - WD14A-30_N30
6,200.0	0.02	237.86	6,166.0	-430.8	-436.4	613.2	0.25	0.25	
6,300.0	0.27	237.86	6,266.0	-430.9	-436.6	613.5	0.25	0.25	
6,395.8	0.51	237.86	6,361.8	-431.3	-437.2	614.1	0.25	0.25	
6,400.0	0.51	237.86	6,366.0	-431.3	-437.2	614.1	0.00	0.00	
6,500.0	0.51	237.86	6,466.0	-431.8	-437.9	615.0	0.00	0.00	
6,600.0	0.51	237.86	6,566.0	-432.2	-438.7	615.9	0.00	0.00	
6,700.0	0.51	237.86	6,666.0	-432.7	-439.5	616.7	0.00	0.00	
6,800.0	0.51	237.86	6,766.0	-433.2	-440.2	617.6	0.00	0.00	
6,900.0	0.51	237.86	6,866.0	-433.7	-441.0	618.5	0.00	0.00	
6,992.4	0.51	237.86	6,958.4	-434.1	-441.6	619.3	0.00	0.00	Molina_Base (TVD)
7,000.0	0.51	237.86	6,966.0	-434.1	-441.7	619.3	0.00	0.00	
7,100.0	0.51	237.86	7,066.0	-434.6	-442.5	620.2	0.00	0.00	
7,200.0	0.51	237.86	7,166.0	-435.1	-443.2	621.1	0.00	0.00	
7,300.0	0.51	237.86	7,266.0	-435.5	-444.0	621.9	0.00	0.00	
7,400.0	0.51	237.86	7,366.0	-436.0	-444.7	622.8	0.00	0.00	
7,500.0	0.51	237.86	7,466.0	-436.5	-445.5	623.7	0.00	0.00	
7,600.0	0.51	237.86	7,566.0	-437.0	-446.2	624.5	0.00	0.00	
7,700.0	0.51	237.86	7,666.0	-437.4	-447.0	625.4	0.00	0.00	
7,800.0	0.51	237.86	7,766.0	-437.9	-447.7	626.3	0.00	0.00	
7,900.0	0.51	237.86	7,866.0	-438.4	-448.5	627.1	0.00	0.00	
8,000.0	0.51	237.86	7,966.0	-438.9	-449.2	628.0	0.00	0.00	
8,100.0	0.51	237.86	8,066.0	-439.3	-450.0	628.9	0.00	0.00	
8,200.0	0.51	237.86	8,165.9	-439.8	-450.7	629.7	0.00	0.00	
8,300.0	0.51	237.86	8,265.9	-440.3	-451.5	630.6	0.00	0.00	
8,400.0	0.51	237.86	8,365.9	-440.7	-452.2	631.5	0.00	0.00	
8,417.5	0.51	237.86	8,383.4	-440.8	-452.4	631.6	0.00	0.00	Drillers TD @ 8383' TVD - Williams Fork (TVD)
8,500.0	0.51	237.86	8,465.9	-441.2	-453.0	632.3	0.00	0.00	
8,600.0	0.51	237.86	8,565.9	-441.7	-453.7	633.2	0.00	0.00	
8,700.0	0.51	237.86	8,665.9	-442.2	-454.5	634.1	0.00	0.00	
8,717.5	0.51	237.86	8,683.4	-442.2	-454.6	634.2	0.00	0.00	Permit TD @ 8683' TVD

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well WD14A-30_N30
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 8336.0ft (Patterson 306)
Project:	Story Gulch	MD Reference:	WELL @ 8336.0ft (Patterson 306)
Site:	N30 495	North Reference:	True
Well:	WD14A-30_N30	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
WD14A-30_N30 PBHL	0.00	0.00	8,383.4	-440.8	-452.4	1,678,981.56	2,267,655.35	39.668803	-108.101881
- plan hits target center									
- Rectangle (sides W30.0 H50.0 D0.0)									
WD14A-30_N30 TGT	0.00	0.00	6,158.4	-430.8	-436.4	1,678,991.12	2,267,671.58	39.668830	-108.101824
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
6,192.4	6,158.4	Wasatch G (TVD)				
6,992.4	6,958.4	Molina_Base (TVD)				
8,417.5	8,383.4	Williams Fork (TVD)				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
500.0	500.0	0.0	0.0	KOP @ 500'	
714.2	713.8	-8.4	-8.5	EOB; Inc=6.43°	
5,978.1	5,944.6	-422.4	-427.9	Start Drop -3.00	
6,192.4	6,158.4	-430.8	-436.4	EOD; Inc=0°	
8,417.5	8,383.4	-431.3	-437.2	Drillers TD @ 8383' TVD	
8,717.5	8,683.4	-440.8	-452.4	Permit TD @ 8683' TVD	