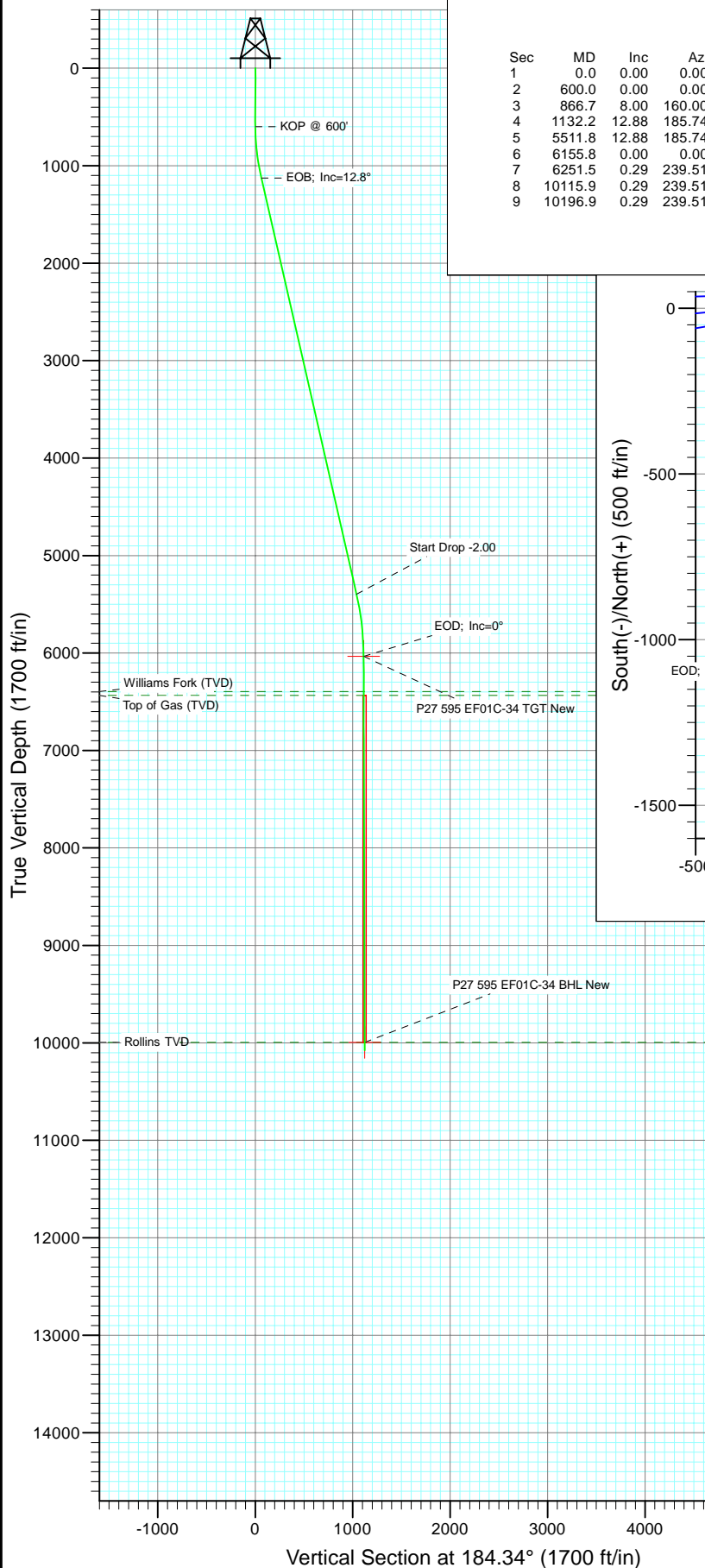


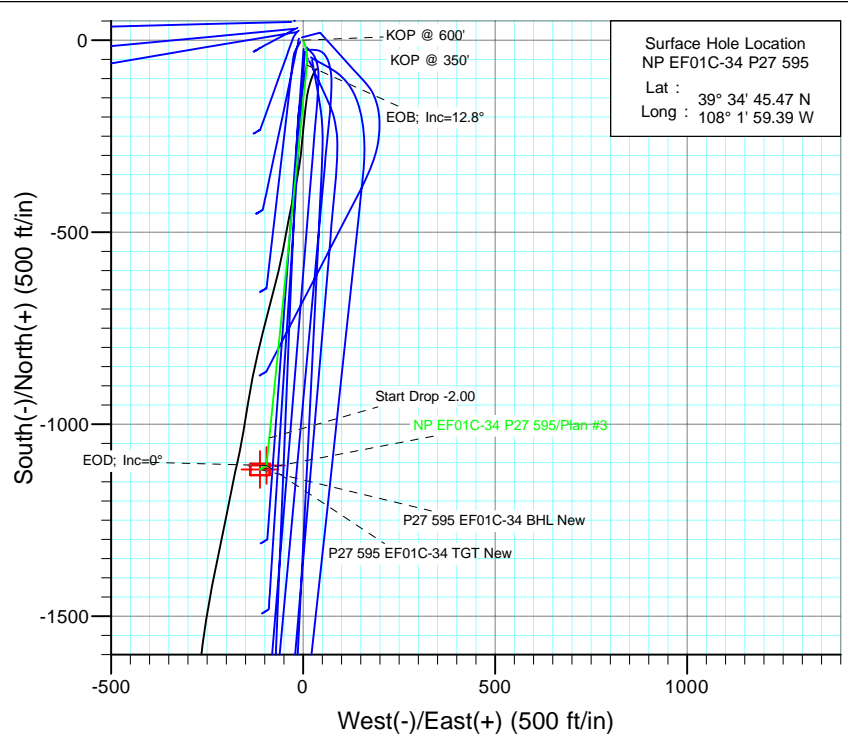


Project: North Piceance
Site: P27 595 (S27-T5S-R95W)
Well: NP EF01C-34 P27 595
Wellbore: DD
Design: Plan #3



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	866.7	8.00	160.00	865.8	-17.5	6.4	3.00	160.00	16.9	
4	1132.2	12.88	185.74	1127.0	-64.3	9.7	2.50	56.88	63.4	
5	5511.8	12.88	185.74	5396.4	-1035.8	-88.0	0.00	0.00	1039.5	
6	6155.8	0.00	0.00	6035.0	-1107.5	-95.2	2.00	180.00	1111.5	P27 595 EF01C-34 TGT New
7	6251.5	0.29	239.51	6130.7	-1107.6	-95.4	0.30	239.51	1111.7	
8	10115.9	0.29	239.51	9995.0	-1117.5	-112.2	0.00	0.00	1122.8	P27 595 EF01C-34 BHL New
9	10196.9	0.29	239.51	10076.0	-1117.7	-112.5	0.00	0.00	1123.0	



Surface Hole Location
NP EF01C-34 P27 595
Lat : 39° 34' 45.47 N
Long : 108° 1' 59.39 W



Azimuths to True North
Magnetic North: 10.65°

Magnetic Field
Strength: 52539.4nT
Dip Angle: 65.87°
Date: 3/9/2009
Model: IGRF200510

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6395.0	6515.8	Williams Fork (TVD)
6435.0	6555.8	Top of Gas (TVD)
9995.0	10115.9	Rollins TVD

Plan #3 NP EF01C-34 P27 595 95xxx; LR EF01C-34 P27 @ 6671.0ft (Original Well Elev) North American Datum 1983 Well NP EF01C-34 P27 595, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W From TVD
Target	P27 595 EF01C-34 BHL	184.34	Slot	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
P27 595 EF01C-34 TGT New	6035.0	-1107.5	-95.239° 34' 34.52 N	108° 2' 0.61 W		
P27 595 EF01C-34 BHL New	9995.0	-1117.5	-112.239° 34' 34.42 N	108° 2' 0.82 W		

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF01C-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF01C-34 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF01C-34 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF01C-34 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

Project	North Piceance		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		P27 595 (S27-T5S-R95W)			
Site Position:		Northing:	1,645,842.89 ft	Latitude:	39° 34' 45.45 N
From:	Lat/Long	Easting:	2,286,079.88 ft	Longitude:	108° 1' 59.43 W
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in	Grid Convergence:	-1.60 °

Well	NP EF01C-34 P27 595					
Well Position	+N/-S	0.0 ft	Northing:	1,645,844.41 ft	Latitude:	39° 34' 45.47 N
	+E/-W	0.0 ft	Easting:	2,286,083.11 ft	Longitude:	108° 1' 59.39 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,649.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	3/9/2009	10.65	65.87	52,539

Design	Plan #3			
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	184.34

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
866.7	8.00	160.00	865.8	-17.5	6.4	3.00	3.00	0.00	160.00	
1,132.2	12.88	185.74	1,127.0	-64.3	9.7	2.50	1.84	9.69	56.88	
5,511.8	12.88	185.74	5,396.4	-1,035.8	-88.0	0.00	0.00	0.00	0.00	
6,155.8	0.00	0.00	6,035.0	-1,107.5	-95.2	2.00	-2.00	0.00	180.00	P27 595 EF01C-34 T
6,251.5	0.29	239.51	6,130.7	-1,107.6	-95.4	0.30	0.30	-125.97	239.51	
10,115.9	0.29	239.51	9,995.0	-1,117.5	-112.2	0.00	0.00	0.00	0.00	P27 595 EF01C-34 B
10,196.9	0.29	239.51	10,076.0	-1,117.7	-112.5	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF01C-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF01C-34 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF01C-34 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF01C-34 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	KOP @ 600'
700.0	3.00	160.00	700.0	-2.5	0.9	2.4	3.00	3.00	
800.0	6.00	160.00	799.6	-9.8	3.6	9.5	3.00	3.00	
866.7	8.00	160.00	865.8	-17.5	6.4	16.9	3.00	3.00	
900.0	8.48	164.74	898.8	-22.0	7.8	21.4	2.50	1.45	
1,000.0	10.21	175.95	997.5	-38.0	10.4	37.1	2.50	1.72	
1,100.0	12.20	183.75	1,095.6	-57.4	10.3	56.4	2.50	1.99	
1,132.2	12.88	185.74	1,127.0	-64.3	9.7	63.4	2.50	2.11	EOB; Inc=12.8°
1,200.0	12.88	185.74	1,193.1	-79.4	8.2	78.5	0.00	0.00	
1,300.0	12.88	185.74	1,290.6	-101.5	6.0	100.8	0.00	0.00	
1,400.0	12.88	185.74	1,388.1	-123.7	3.7	123.1	0.00	0.00	
1,500.0	12.88	185.74	1,485.5	-145.9	1.5	145.4	0.00	0.00	
1,600.0	12.88	185.74	1,583.0	-168.1	-0.7	167.7	0.00	0.00	
1,700.0	12.88	185.74	1,680.5	-190.3	-2.9	190.0	0.00	0.00	
1,800.0	12.88	185.74	1,778.0	-212.5	-5.2	212.2	0.00	0.00	
1,900.0	12.88	185.74	1,875.5	-234.6	-7.4	234.5	0.00	0.00	
2,000.0	12.88	185.74	1,973.0	-256.8	-9.6	256.8	0.00	0.00	
2,100.0	12.88	185.74	2,070.4	-279.0	-11.9	279.1	0.00	0.00	
2,200.0	12.88	185.74	2,167.9	-301.2	-14.1	301.4	0.00	0.00	
2,300.0	12.88	185.74	2,265.4	-323.4	-16.3	323.7	0.00	0.00	
2,400.0	12.88	185.74	2,362.9	-345.5	-18.6	346.0	0.00	0.00	
2,500.0	12.88	185.74	2,460.4	-367.7	-20.8	368.2	0.00	0.00	
2,600.0	12.88	185.74	2,557.9	-389.9	-23.0	390.5	0.00	0.00	
2,700.0	12.88	185.74	2,655.3	-412.1	-25.3	412.8	0.00	0.00	
2,800.0	12.88	185.74	2,752.8	-434.3	-27.5	435.1	0.00	0.00	
2,900.0	12.88	185.74	2,850.3	-456.4	-29.7	457.4	0.00	0.00	
3,000.0	12.88	185.74	2,947.8	-478.6	-31.9	479.7	0.00	0.00	
3,100.0	12.88	185.74	3,045.3	-500.8	-34.2	502.0	0.00	0.00	
3,200.0	12.88	185.74	3,142.8	-523.0	-36.4	524.2	0.00	0.00	
3,300.0	12.88	185.74	3,240.2	-545.2	-38.6	546.5	0.00	0.00	
3,400.0	12.88	185.74	3,337.7	-567.4	-40.9	568.8	0.00	0.00	
3,500.0	12.88	185.74	3,435.2	-589.5	-43.1	591.1	0.00	0.00	
3,600.0	12.88	185.74	3,532.7	-611.7	-45.3	613.4	0.00	0.00	
3,700.0	12.88	185.74	3,630.2	-633.9	-47.6	635.7	0.00	0.00	
3,800.0	12.88	185.74	3,727.7	-656.1	-49.8	658.0	0.00	0.00	
3,900.0	12.88	185.74	3,825.1	-678.3	-52.0	680.3	0.00	0.00	
4,000.0	12.88	185.74	3,922.6	-700.4	-54.3	702.5	0.00	0.00	
4,100.0	12.88	185.74	4,020.1	-722.6	-56.5	724.8	0.00	0.00	
4,200.0	12.88	185.74	4,117.6	-744.8	-58.7	747.1	0.00	0.00	
4,300.0	12.88	185.74	4,215.1	-767.0	-61.0	769.4	0.00	0.00	
4,400.0	12.88	185.74	4,312.6	-789.2	-63.2	791.7	0.00	0.00	
4,500.0	12.88	185.74	4,410.0	-811.3	-65.4	814.0	0.00	0.00	
4,600.0	12.88	185.74	4,507.5	-833.5	-67.6	836.3	0.00	0.00	
4,700.0	12.88	185.74	4,605.0	-855.7	-69.9	858.5	0.00	0.00	
4,800.0	12.88	185.74	4,702.5	-877.9	-72.1	880.8	0.00	0.00	
4,900.0	12.88	185.74	4,800.0	-900.1	-74.3	903.1	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF01C-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF01C-34 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF01C-34 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF01C-34 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

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
5,000.0	12.88	185.74	4,897.5	-922.3	-76.6	925.4	0.00	0.00	
5,100.0	12.88	185.74	4,994.9	-944.4	-78.8	947.7	0.00	0.00	
5,200.0	12.88	185.74	5,092.4	-966.6	-81.0	970.0	0.00	0.00	
5,300.0	12.88	185.74	5,189.9	-988.8	-83.3	992.3	0.00	0.00	
5,400.0	12.88	185.74	5,287.4	-1,011.0	-85.5	1,014.5	0.00	0.00	
5,500.0	12.88	185.74	5,384.9	-1,033.2	-87.7	1,036.8	0.00	0.00	
5,511.8	12.88	185.74	5,396.4	-1,035.8	-88.0	1,039.5	0.00	0.00	Start Drop -2.00
5,600.0	11.12	185.74	5,482.6	-1,054.0	-89.8	1,057.8	2.00	-2.00	
5,700.0	9.12	185.74	5,581.1	-1,071.5	-91.6	1,075.4	2.00	-2.00	
5,800.0	7.12	185.74	5,680.1	-1,085.5	-93.0	1,089.5	2.00	-2.00	
5,900.0	5.12	185.74	5,779.5	-1,096.1	-94.1	1,100.1	2.00	-2.00	
6,000.0	3.12	185.74	5,879.2	-1,103.3	-94.8	1,107.3	2.00	-2.00	
6,100.0	1.12	185.74	5,979.2	-1,107.0	-95.1	1,111.0	2.00	-2.00	
6,155.8	0.00	185.74	6,035.0	-1,107.5	-95.2	1,111.5	2.00	-2.00	EOD; Inc=0° - P27 595 EF01C-34 TGT New
6,200.0	0.13	239.51	6,079.2	-1,107.5	-95.2	1,111.6	0.30	0.30	
6,251.5	0.29	239.51	6,130.7	-1,107.6	-95.4	1,111.7	0.30	0.30	
6,300.0	0.29	239.51	6,179.2	-1,107.7	-95.6	1,111.8	0.00	0.00	
6,400.0	0.29	239.51	6,279.2	-1,108.0	-96.1	1,112.1	0.00	0.00	
6,500.0	0.29	239.51	6,379.2	-1,108.3	-96.5	1,112.4	0.00	0.00	
6,515.8	0.29	239.51	6,395.0	-1,108.3	-96.6	1,112.4	0.00	0.00	Williams Fork (TVD)
6,555.8	0.29	239.51	6,435.0	-1,108.4	-96.7	1,112.5	0.00	0.00	Top of Gas (TVD)
6,600.0	0.29	239.51	6,479.2	-1,108.5	-96.9	1,112.7	0.00	0.00	
6,700.0	0.29	239.51	6,579.2	-1,108.8	-97.4	1,113.0	0.00	0.00	
6,800.0	0.29	239.51	6,679.2	-1,109.0	-97.8	1,113.2	0.00	0.00	
6,900.0	0.29	239.51	6,779.2	-1,109.3	-98.2	1,113.5	0.00	0.00	
7,000.0	0.29	239.51	6,879.2	-1,109.5	-98.7	1,113.8	0.00	0.00	
7,100.0	0.29	239.51	6,979.2	-1,109.8	-99.1	1,114.1	0.00	0.00	
7,200.0	0.29	239.51	7,079.2	-1,110.0	-99.5	1,114.4	0.00	0.00	
7,300.0	0.29	239.51	7,179.2	-1,110.3	-100.0	1,114.7	0.00	0.00	
7,400.0	0.29	239.51	7,279.2	-1,110.6	-100.4	1,115.0	0.00	0.00	
7,500.0	0.29	239.51	7,379.2	-1,110.8	-100.8	1,115.3	0.00	0.00	
7,600.0	0.29	239.51	7,479.1	-1,111.1	-101.3	1,115.5	0.00	0.00	
7,700.0	0.29	239.51	7,579.1	-1,111.3	-101.7	1,115.8	0.00	0.00	
7,800.0	0.29	239.51	7,679.1	-1,111.6	-102.1	1,116.1	0.00	0.00	
7,900.0	0.29	239.51	7,779.1	-1,111.8	-102.6	1,116.4	0.00	0.00	
8,000.0	0.29	239.51	7,879.1	-1,112.1	-103.0	1,116.7	0.00	0.00	
8,100.0	0.29	239.51	7,979.1	-1,112.3	-103.4	1,117.0	0.00	0.00	
8,200.0	0.29	239.51	8,079.1	-1,112.6	-103.9	1,117.3	0.00	0.00	
8,300.0	0.29	239.51	8,179.1	-1,112.9	-104.3	1,117.6	0.00	0.00	
8,400.0	0.29	239.51	8,279.1	-1,113.1	-104.7	1,117.9	0.00	0.00	
8,500.0	0.29	239.51	8,379.1	-1,113.4	-105.2	1,118.1	0.00	0.00	
8,600.0	0.29	239.51	8,479.1	-1,113.6	-105.6	1,118.4	0.00	0.00	
8,700.0	0.29	239.51	8,579.1	-1,113.9	-106.0	1,118.7	0.00	0.00	
8,800.0	0.29	239.51	8,679.1	-1,114.1	-106.5	1,119.0	0.00	0.00	
8,900.0	0.29	239.51	8,779.1	-1,114.4	-106.9	1,119.3	0.00	0.00	
9,000.0	0.29	239.51	8,879.1	-1,114.7	-107.3	1,119.6	0.00	0.00	
9,100.0	0.29	239.51	8,979.1	-1,114.9	-107.8	1,119.9	0.00	0.00	
9,200.0	0.29	239.51	9,079.1	-1,115.2	-108.2	1,120.2	0.00	0.00	
9,300.0	0.29	239.51	9,179.1	-1,115.4	-108.6	1,120.4	0.00	0.00	
9,400.0	0.29	239.51	9,279.1	-1,115.7	-109.1	1,120.7	0.00	0.00	
9,500.0	0.29	239.51	9,379.1	-1,115.9	-109.5	1,121.0	0.00	0.00	
9,600.0	0.29	239.51	9,479.1	-1,116.2	-109.9	1,121.3	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well NP EF01C-34 P27 595
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	EF01C-34 P27 @ 6671.0ft (Original Well Elev)
Project:	North Piceance	MD Reference:	EF01C-34 P27 @ 6671.0ft (Original Well Elev)
Site:	P27 595 (S27-T5S-R95W)	North Reference:	True
Well:	NP EF01C-34 P27 595	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

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
9,700.0	0.29	239.51	9,579.1	-1,116.4	-110.4	1,121.6	0.00	0.00	
9,800.0	0.29	239.51	9,679.1	-1,116.7	-110.8	1,121.9	0.00	0.00	
9,900.0	0.29	239.51	9,779.1	-1,117.0	-111.3	1,122.2	0.00	0.00	
10,000.0	0.29	239.51	9,879.1	-1,117.2	-111.7	1,122.5	0.00	0.00	
10,100.0	0.29	239.51	9,979.1	-1,117.5	-112.1	1,122.7	0.00	0.00	
10,115.9	0.29	239.51	9,995.0	-1,117.5	-112.2	1,122.8	0.00	0.00	Rollins TVD - P27 595 EF01C-34 BHL New
10,196.9	0.29	239.51	10,076.0	-1,117.7	-112.5	1,123.0	0.00	0.00	

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
P27 595 EF01C-34 BHL - plan hits target center - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	9,995.0	-1,117.5	-112.2	1,644,730.47	2,285,939.81	39° 34' 34.42 N	108° 2' 0.82 W
P27 595 EF01C-34 TGT - plan hits target center - Point	0.00	0.00	6,035.0	-1,107.5	-95.2	1,644,739.99	2,285,957.07	39° 34' 34.52 N	108° 2' 0.61 W

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,515.8	6,395.0	Williams Fork (TVD)			
6,555.8	6,435.0	Top of Gas (TVD)			
10,115.9	9,995.0	Rollins TVD			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
600.0	600.0	0.0	0.0	KOP @ 600'
1,132.2	1,127.0	-17.5	6.4	EOB; Inc=12.8°
5,511.8	5,396.4	-64.3	9.7	Start Drop -2.00
6,155.8	6,035.0	-1,035.8	-88.0	EOD; Inc=0°
10,196.9	10,076.0	-1,107.5	-95.2	Drillers TD @ 10,076' TVD